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DISASTER RELIEF LOGISTICS DOCTRINE FOR U.S. ARMY UNITS: FACT OR FICTION?

A RESEARCH STUDY FOR
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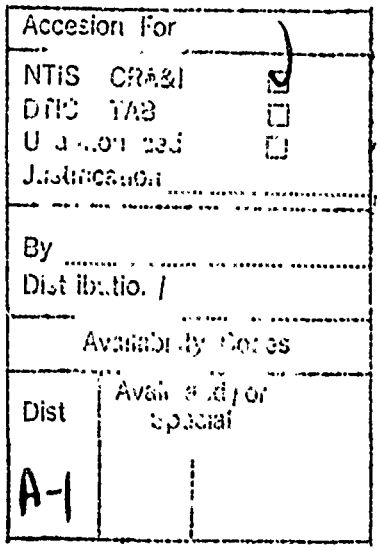

ABSTRACT

This research paper evaluated the adequacy of the Department of the Army's logistics doctrine and determined whether that doctrine was adequate to support Army units in conducting disaster relief support. The author also investigated the Army's training policy concerning disaster relief operations (both foreign and domestic operations). The author used interviews of military and civilian experts in disaster relief operations along with analysis of unit after action reports in order to reach his findings. The author determined that the existing logistics doctrine was adequate for US Army units. The author also determined there was a need for field grade officers to attend an overview course on disaster relief systems and organizations. Additionally, the author felt the Army should develop a field manual or other suitable publication devoted to disaster relief operations for use by Army units in the field.

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CHAPTER 1

INTRODUCTION

Background

Natural and man-made disasters are a constant reminder to man about his fragile existence in today's world. As man increases his population, the probability of a disastrous event impacting on man or his property increases with each passing year. In 1989 there were 58 foreign disasters in 42 countries that the United States' government responded to with monetary or other assistance. These disasters represent a general increase in frequency over the last decade.(8:8-9)*

The United Nations established the United Nations Disaster Relief Office (UNDRO) in the 1970s to help coordinate the relief efforts of governments that came to the aid of a stricken country. While the UNDRO has had difficulty in efficiently caring out that role, it does serve as an international controlling body to assist the country in need.(2:119) Interfacing with the UNDRO and any country that requests aid from the United States is the

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* A numbered bibliography is used in this paper. The first number in the parenthesis indicates the reference as listed in the bibliography. The number following the colon indicates the page(s) of the cited reference.

Office of Foreign Disaster and Assistance (OFDA) which is a part of the Agency for International Development (AID).

Up to now, only foreign disaster assistance has been discussed. If a disaster occurs within the United States, its territories, or possessions, another governmental body has responsibility to coordinate the disaster relief effort. That organization is the Federal Emergency Management Agency (FEMA). Created in 1978 by President Carter, FEMA was to centralize the federal government's control over emergency planning and execution.

A general understanding of both OFDA (foreign disasters) and FEMA (domestic disasters) is needed as these two agencies can task DoD for disaster relief support. Were it not for these two agencies' support needs, the Department of Defense (DoD) and the Army wouldn't have a disaster relief support mission.

Role of OFDA.

If a disaster occurs within a foreign country, and that country feels that it is unable to respond fully to the disaster with its own resources, then the country can ask the American ambassador for assistance. The American ambassador, in turn, can request through State Department channels to have the OFDA assist the requesting government.

OFDA will coordinate all of the United States government's relief efforts to the stricken country. This assistance can be either monetary assistance, relief

supplies and equipment, and/or U.S. government organizations augmenting the requesting country's relief efforts.(7:10-13) [See Figure 1.]

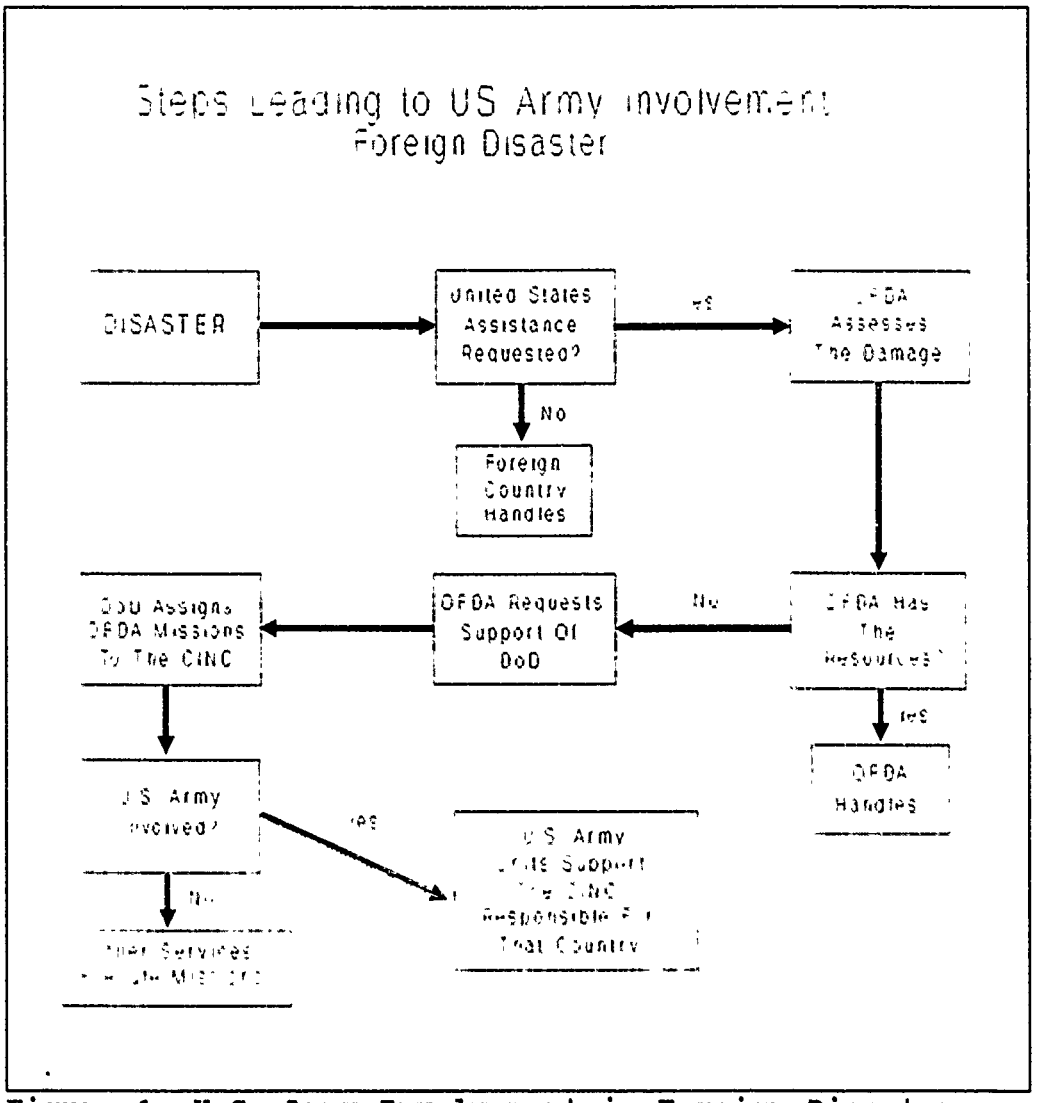

Figure 1 U.S. Army Involvement in Foreign Disasters

Role of FEMA.

FEMA's responsibilities included planning and responding to civil defense, natural disasters, and man-made disaster events.(55:5) If a natural or man-made

disaster occurs within the United States, the local and state governments are responsible to respond to the disaster. If that disaster is beyond the capabilities of the local and state governments then the state governor can request the President of the United States to declare that state a federal disaster area. Once the President has made that declaration, then FEMA "represents the President under provisions of Section 303, 304, Public Law 93-288 for the purpose of coordinating the administration relief activities in the affected area."(55:11) [See Figure 2.]

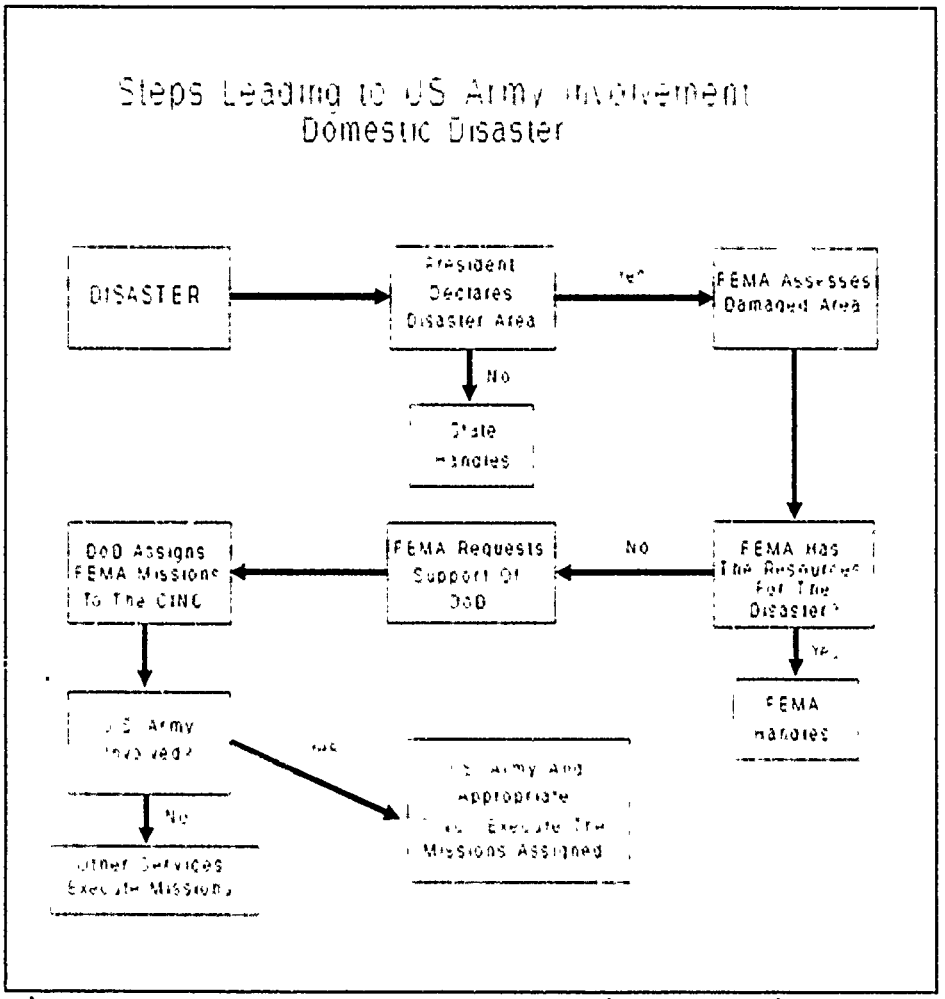

Figure 2 U.S. Army Involvement in Domestic Disasters

Role of Department of Defense (DoD).

OFDA or FEMA can request DoD support to augment their disaster relief assistance. DoD's support is "limited to those resources that are not immediately required for the execution of the primary military mission."(24:3 and 25:2) When OFDA has requested assistance of DoD for foreign disasters, DoD will task the required support mission to the appropriate geographical responsible Commander in Chief (CINC). The CINC then is responsible to provide the OFDA requested support as expeditiously as possible.

For domestic disasters, DoD will task the support requested by FEMA to the appropriate CINC. As with foreign disasters, the CINC is then responsible to provide the requested support as quickly as possible for FEMA.

Role of the U.S. Army.

The U.S. Army is responsible to support the CINCs in carrying out their assigned missions. Under the Goldwater-Nichols DoD Reorganization Act of 1986, all of the services are responsible to train, equip, and maintain their forces to support the CINC's missions.(13:2-7) This responsibility includes preparing doctrine to guide those forces in conducting the missions in support of the CINCs. All army organizations are eligible to be tasked to support a CINC. Consequently, Army units can and have been tasked with supporting disaster relief operations both domestically and in foreign countries.

Problem

In 1970 an earthquake struck "the Andean valley of the Callejon de Huayles in Peru with 50,000 to 70,000 dead and 800,000 homeless."(38:14) During this operation the inefficient use of United States military resources was noticeable. A helicopter aircraft carrier, the USS Guam, was an expensive but inappropriate resource to support the disaster relief operation. Also seriously questioned was the effectiveness of military survey teams.

> Immediately following the earthquake, the State Department dispatched the military Disaster Assistance and Survey Team (DAST). After watching the DAST people spend two relaxed weeks at the Anta air base, embassy officials, pilots, and Peruvian officers could only guess at what they were doing. Finally, the DAST was quietly recalled.(38:14)

This article, while dated, shows that the U.S. military didn't fully understand the unique circumstances for use of military resources in disaster relief operations.

In the mid 1980s, the Army and the Air Force undertook a joint study. The military needed the study because they felt that not enough doctrine existed for operations in situations short of general war or as the study called these operations, low intensity conflict (LIC).

In August, 1986 the project presented their results. One of their conclusions was "no doctrine or concept exists for combat support/combat service support (CS/CSS) as the supported rather than the supporting elements in low-intensity conflict."(4:F1-1)

Accepting (for now) that disaster relief is covered doctrinally within LIC, this project showed a distinct void in doctrinal literature covering all of LIC, not just disaster relief. That same project tasked the United States Army Logistics Center (now the Combined Arms Support Command) at Fort Lee, Virginia to develop an operational concept for logistics in LIC and validate that concept. The concept was never approved by the Logistics Center and Training and Doctrine Command (TRADOC). To date no formal single approved document exists that is devoted to LIC logistics or disaster relief logistics.

Most recently, two Army field grade officers expressed doubts to the researcher about the logistical performance of Army units while performing disaster relief operations. One made these observations while supervising the units as a member of a higher headquarters staff. The other's observations came while serving with a unit that conducted disaster relief operations. Both officers felt the units they observed didn't perform as well as they should have. They also felt that the unit organizations and leaders didn't know enough about providing the necessary logistical

support to their organizations and to OFDA/FEMA as required. These officers felt that the problem was a doctrinal issue, because the units didn't know *how* to provide their logistical support in a disaster relief situation.

The units apparently were unclear about logistical principles guiding support in disaster relief and techniques for accomplishing that support as efficiently as possible. Both officers felt there was an informational void for units tasked to conduct disaster relief and to guide their logistical operations in supporting disaster relief missions.

Purpose

The purpose of the study was to analyze the US Army's logistics doctrine for units that conduct disaster relief operations to determine whether the doctrine provides the framework needed for units to successfully support disaster relief operations.

Subproblems

The following subproblems were answered in order to resolve the purpose statement:

Subproblem 1: What is the Army's logistics doctrine for units conducting disaster relief operations?

Subproblem 2: What is the Army's policy concerning units conducting disaster relief training?

Subproblem 3: What influence did logistics doctrine have on the performance of the Army units conducting disaster relief operations?

Subproblem 4: Have Army units satisfactorily supported disaster relief operations? If not, was logistics one of the reason(s) why they are not successful.

Assumptions

The following assumptions were used for this research paper:

1. The Army will continue to support disaster relief operations in the future both in the United States and in foreign countries.

2. The frequency of disaster events will not decrease significantly and may increase in the future.

3. Unit disaster relief after action reports (AARs) will address strengths and weaknesses of those participating units.

4. Existing plans for CINC United States Southern Command (USSOUTHCOM) and for CINC United States Atlantic Command (USLANTCOM) are representative of other CINCs training requirements for units to support disaster relief operations.

5. Disaster relief doctrine will continue to be encapsulated within low intensity conflict (LIC). The military covers disaster relief support within LIC doctrine because disaster relief support, by itself, is not a major

doctrinal area. Specifically, LIC doctrine addresses disaster relief support as a subset of peacetime contingency operations.

Scope and Limitations of the Problem

This study focused on logistics doctrine for U.S. Army units supporting disaster relief operations both in the United States and also in foreign countries. While the requesting governmental agencies differ depending on the location of the disaster, the principles governing the logistical support remain somewhat constant.

The report focused not only on U.S. Army support following natural disasters but also included man-made disasters. The report did not include disaster situations incident to wars or combat actions (i.e. Persian Gulf oil spill caused by Iraq during Operation Desert Storm).

Additionally, the report examined only U.S. Army logistics doctrine as it pertains to disaster relief operations and did not delve extensively into joint logistics doctrine.

Because of time and expenses, the researcher could only travel within a three to four hour distance from his residence. Consequently, some of the interviews conducted in this study were by telephone in lieu of in person. Time and budget constraints limited the researcher to speaking or meeting with only two representatives from the National Guard.

Another limitation was in gathering a substantial number of AARs from units that had participated in disaster relief operations. Most Army units, with recent disaster relief experience were deployed to the Middle East. Locating their AARs from their rear detachments was difficult if not impossible in some cases.

This study did not examine the medical support role of disaster relief or the mechanics of providing supply support to medical operations. The rationale for that statement was due to the U.S. Army separating doctrinal responsibilities for logistics and medical support. The U.S. Army delineates doctrinal responsibility for logistical operations to Combined Arms Support Command at Fort Lee, Virginia. Meanwhile, medical and medical supply support doctrine is overseen by The Health Services Command at Fort Sam Houston, Texas.

Definition of Terms

1. Disaster. A disaster may be an act of nature (such as a flood, drought, fire, hurricane, earthquake, volcanic eruption, mud slide, or epidemic) or an act of man (such as riot, violence, civil strife, explosion, fire, oil spill or other hazardous material incident, or epidemic) that is so severe that requests will be initiated by the appropriate government or agency for U.S. government assistance.(24:2 and 25:2)

2. Disaster relief. Prompt aid which can be used to alleviate the suffering of the victims. (Normally, it includes humanitarian services and transportation; the provision of food, clothing, medicines, beds and bedding, temporary shelter and housing; the furnishing of medical material, medical and technical personnel; and making the repairs to or assisting the restoration of essential services in the affected area.)(24:2)

3. Doctrine. Doctrine are those tactics, techniques and procedures (all of these are methods) that tells commanders and organizations how to accomplish mission tasks. Doctrine may also cover those principles that will guide commanders in non-specific situations where precise techniques may not be appropriate or difficult to identify.

4. Disaster relief doctrine. This will be the specific tactics, techniques and procedures that commanders and organizations will use to accomplish their tasks. The methods are those generic items that are universal in disaster situations, whether foreign or domestic. Usually organizational disaster relief support plans will specify those methods that will be used in that specific plan.

5. Logistics. The science of planning and carrying out the movement, maintenance and supply of forces or organizations engaged in the accomplishment of an assigned or implied mission.(15:x)

6. Low intensity conflict (LIC). Disaster relief doctrine falls within the broad coverage of low intensity conflict doctrine. Low intensity conflict is:

> A limited political-military struggle to achieve political, social, economic, or psychological objectives. It is often protracted and ranges from diplomatic, economic, and psycho-social pressures through terrorism and insurgency. Low intensity conflict is generally confined to a geographic area and is often characterized by constraints on the weaponry, tactics, and level of violence.(23:Glossary-2)

7. Peacetime contingency operation. Peacetime contingency operations are one of four categories of LIC operations. Military LIC doctrine considers disaster relief as a peacetime contingency operation. Consequently, a definition of peacetime contingency operations is needed. Peacetime contingency operations are:

> Politically sensitive military operations normally characterized by the short term rapid projection or employment of forces in conditions short of conventional war, e.g. strike, raid, rescue, recovery, demonstration, *disaster relief assistance,* [emphasis author's own] and unconventional warfare.(23:Glossary-2)

Importance of the Study

While the logistical support to disaster relief operations is not the most high risk operation units conduct in the Army, disaster relief operations are very politically sensitive. The U.S. Army needs to conduct its disaster relief missions (i.e. search and rescue, debris removal, transportation of supplies, flood protection, warehousing and distribution operations) soon after the onset of the disaster. These missions are critical to the local government (whether domestic or foreign) to replace damaged or destroyed services and infrastructures in the disaster area. Speed is of the essence in these operations. Detailed logistical planning is critical. Such detailed planning is found in the plans prepared by the CINCs and the major Army commands responsible for assisting in disaster relief operations in the United States and throughout the world.

Often disasters can often occur rapidly and support is needed with minimum delay. Consequently, executing units must make simultaneous changes to their existing logistics plans as the unit is executing the mission. Due to the political sensitivity of these missions and to the short response time that units have, a detailed study was needed to critically look at our performance in accomplishing those missions.

Based on comparable or greater frequency of disaster response requests in the future, the Army needs to ensure that our past performance has been successful and the proper doctrine exists to guide future operations. If shortfalls exist in our logistics doctrine, then the results of this study can assist the author of an emerging field manual on low intensity conflict logistics. By addressing disaster relief logistics in the future manual, the doctrinal void would be corrected. If shortfalls exist in the Army's disaster relief support doctrine, then the researcher can recommend the appropriate actions to correct the doctrinal deficiency.

Few other operations besides disaster relief place Army combat support and combat service support units as quickly into the world's spotlight. Lives and property hinge on the successful accomplishment of that mission. The disaster relief support provided is in turn dependant on the logistical decisions and actions of those unit planners and executors. Failure on the Army's part logistically to support disaster relief operations has a direct impact on the civilian lives and property we are assisting in the name of our government.

CHAPTER 2

METHODOLOGY

The methodology for collecting and analyzing data relevant to this study was structured around the subproblem questions. Due to the interrelationships of subproblems one and two, and three and four, the methodology was different for these two groups of subproblems.

Subproblems One and Two

Subproblem one asked, "What is the Army's logistics doctrine for units conducting disaster relief operations?" Subproblem two asked, "What is the Army's policy concerning units conducting disaster relief training?"

Nature and Sources of Data.

The data for subproblems one and two were all primary data. The data were broken into two main types: written documentation and expert interviews. Written documentation was used because there are existing regulations and some other written information concerning disaster relief operations.

Expert information served as the second source of primary data. Expert information was especially important. As Julian L. Simon stated:

> Expert opinion can often be useful as a source of objective information that might be more difficult to collect by other techniques. A more crucial

> use of expert opinion, however, is for judgments that require examination of an entire *context,* that is, taking into account an ill-defined *total picture* rather than a limited number of well-defined factors.(12:209)

Due to a perceived lack of doctrinal information, these experts helped define the "total picture."

Written documentation. Any documentation that outlined existing plans, regulations, and logistics doctrine concerning disaster relief operations was a source. The sources of this data are listed in Appendix A.

Expert information. This came from the following sources: 1) Department of the Army (Directorate of Military Support) Engineer manager for disaster relief operations, 2) Engineer representative from the U.S. Army Corps of Engineers (Washington D.C., Operations office), and 3) two full time National Guard officers responsible for disaster relief planning and training. One of these officers was from the Commonwealth of Virginia and the other officer was from the state of Alabama.

Criteria for Admissability of the Data.

The written data had to be a current plan or publication that would have been available to the appropriate personnel in the field. The experts who provided the information had at least one year experience in their position (one had ten years, one three and the other

had one). Also they had been involved in overseeing disaster relief operations and plans. Both the written and expert data had to be relevant to the two subproblems.

Plans For the Collection Data.

The Army regulations, TRADOC pamphlet and field manuals were acquired from the Quartermaster School Library, Ft. Lee, VA. The DoD regulations were acquired from the mail room at the Army Logistics Material College at Ft. Lee. Also the subject matter expert on low intensity conflict at Combined Arms Support Command (CASCOM) provided some written material. The appropriate headquarters provided their disaster relief plans after either a written or telephonic request by the researcher. In the case of USLANTCOM, the researcher did have to sign for their plans, even though they were unclassified.

Personal interviews were conducted at the expert's office by the researcher. Prior to the interview, the researcher prepared a letter with a list of questions and guidelines (see Appendix B and C) for the interview and mailed the list to the expert. The day before the interview, the researcher reconfirmed the interview time and place. A microcassette recorder was used initially to record the interview with the expert's permission. After one interview, the researcher felt that the tape recorder hindered the expert in answering the questions by making him feel nervous. After that interview, the researcher used

hand written notes in lieu of the tape recorder. The researcher was able to make detailed notes during the interviews, consequently an accurate record of the interview was still maintained. After the interview, the researcher prepared a summary sheet of the key points of each interview for future reference (see Appendix K).

Treatment of the Data.

Both the written and the expert data were analyzed for applicability to disaster relief operations. The data determined the logistical policy, guidelines, standards, procedures, and tactics/techniques for logistical support to disaster relief operations. Also determined by this analysis was the U.S. Army's policy concerning training for disaster relief operations.

Goals of the analysis were to establish if there are any situations where U.S. Army units can train for disaster relief operations. Also accomplished by this analysis was a comprehensive explanation of the existing logistical doctrine for disaster relief operations.

The logistics and training guidelines derived from this analysis answered subproblem questions one and two. These answers served as the basis for further analysis concerning subproblems three and four.

Subproblems Three and Four

Subproblem three asked, "What influence did logistics doctrine have on the performance of the Army units

conducting disaster relief operations?" Subproblem four asked, "Have Army units satisfactorily supported disaster relief operations? If not, was logistics one of the reason(s) why they are not successful."

Nature and Sources of the Data.

Data for subproblems three and four consisted of both primary and secondary data.

Primary data. The primary data was expert information and after-action reports. The rationale for using expert information was the same as stated earlier concerning expert information for subproblems one and two. The expert information and judgement were needed because these subproblems are not easily broken into smaller parts. Additionally, because subproblem four discusses degrees of success, this involved people judging or evaluating their success in accomplishing the mission. "Expert opinion is indispensable when the judgement involves human values."(12:210)

The researcher desired to have actual unit input into the primary data. This was accomplished by using after-action reports. The after-action reports were desirable because these reports are usually prepared shortly after the disaster support ends. The researcher assumed the reports were impartial and complete concerning the problems the units discovered. Lastly, some of the units (and their members) that had participated in recent disaster relief

operations weren't available for the researcher to conduct personal interviews due to Operation Desert Shield/Storm. Consequently, the AARs were the only unit data available to the researcher at that time.

The expert data was collected from eleven people who were all experts in their appropriate area. These individuals had served more than one year in their positions which dealt with some facet of disaster relief. (See Appendix D for a by-name listing of these experts.)

The written data consisted of disaster relief after-action reports collected from several units that had participated in disaster relief operations.*

Secondary data. Secondary sources consisted of magazine articles and book accounts of Army personnel who had participated in disaster relief operations.

Criteria For Admissability of Data.

Primary data. The experts who provided the information had to have at least 1 year experience in their position. They must also have been involved in overseeing disaster relief operations and plans from their position or were actively involved in the preparation of doctrine covering disaster relief logistics. These experts were knowledgeable enough to have made recommendations concerning resolutions of any deficiencies in doctrine.

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*See Appendix D for a complete listing of units and after action reports and for secondary data sources.

The after-action data needed to comment about the impact logistics played in mission accomplishment. The data either indicated that problems with logistical operations had a negative impact on accomplishing the mission or that logistical problems were not significant. These problems may have been derived from a doctrinal base deficiency, or they may have resulted from units and leaders not properly executing the plan or order when given to them. The data also needed to address the level of mission accom-plishment in support of the disaster relief operation. The data could have stated that changes to existing logistics doctrine was or was not needed for future operations.

Secondary data. The data covered disaster relief operations conducted by U.S. Army personnel within the last 30 years. These operations might have been in the United States or in foreign countries. The data addressed the level of mission accomplishment and the benefits the disaster relief effort aided the affected region. The data commented about logistical functions or operations and the impact that logistics played on the disaster relief assistance. The data didn't have to state whether the logistics was a key factor in mission accomplishment or failure, but such information was helpful.

Plans For the Collection of Data.

Primary data. The researcher contacted each of the experts for interviews either in writing (see Appendix B for

a sample letter) or by telephone. Once the expert agreed to the interview, a topic list of questions (see Appendix C) was forwarded to the expert before the interview date. These questions served as a guideline for the interview and also let the expert understand the purpose and objective of the interview. The researcher then contacted the expert the day prior to the interview if the interview were to be done in person at the expert's work place. This contact served to reconfirm the date and time of the interview and also allowed the expert to ask about any procedural questions.

The interview itself was either done in person or over the telephone. The researcher recorded the face-to-face interviews using written notes. Initially the researcher tried to use a cassette recorder (with the expert's permission) to keep a verbatim record of the interview. After the first interview, the researcher determined the expert was very apprehensive about a tape recorder being used. Consequently, the researcher made only written notes of the interviews. A record of the telephonic interviews was done by hand. Some interviews required no longer than forty-five minutes to complete, however others took as long as two and a half hours.

Follow-up interviews were not required based on the results of the after-action reports analysis. If they had been, an additional questionnaire guide was to be prepared for that interview. The interviewer would have conducted

that interview using the same procedures as the initial interview.

The researcher requested the after-action reports by telephoning the experts or other individuals who were the holders of these reports. If written requests were needed, they were submitted. In all cases, the researcher attempted to get an estimated ship date from the holder of the records. Follow up telephone calls were made every two weeks after the agreed upon suspense date if the reports had not been received by the researcher. If the report was not received by May 15, 1991, then it was not used in the research analysis.

Secondary data. The researcher conducted subject and article searches in the ALMC library using their civilian and military periodical index listings and their listings of books in print. The New York Times index was also searched. The searches were for appropriate articles that dealt will U.S. Army units and disaster relief operations. Once articles were identified, the researcher collected them from the library or requested them through inter-library loans.

Treatment of the Data.

The researcher analyzed both the primary and secondary data to determine whether the units supporting OFDA or FEMA's disaster relief operations had accomplished their missions. The term *successful operations* was used to describe those missions supported with no problems mentioned. *Success*

with shortcomings described those missions where there were some difficulties, but still mission accomplishment was achieved. *Less than acceptable mission accomplishment* meant the mission was not successfully accomplished or was accomplished only with great difficulty.

The researcher analyzed the AAR information to determine if any failures noted were caused by doctrinal shortfalls or due to other reasons and what specifically that reason was. If the AAR failed to mention anything negatively about logistics doctrine, the researcher used that omission as a basis to state that the existing logistics doctrine was adequate. AAR and interview comments were compared for consistency when common disaster events were examined. The researcher was prepared to resolve conflicts between AAR data and expert interviews by conducting additional follow-up interviews to reconcile those conflicts. No such reconciliations were needed.

This analysis then enabled the researcher to answer subproblems three and four.

CHAPTER 3

Related Literature

Introduction

There are several relevant documents concerning disaster relief operations and logistics doctrine. Unfortunately, no research projects were located that specifically dealt with logistic support for disaster relief operations.

The first section of this chapter discusses background material for disasters and disaster relief. The researcher looked at an excellent book covering foreign disasters and international disaster relief efforts in this section. The book explains the cause and effects of disasters and how the international disaster relief system operates.

Dealt with next is related literature that applies to subproblems one and two. This section consists of several studies, papers and a project report. The material looked at combat service support, logistics principles and low intensity conflict (which disaster relief is a part of for doctrinal purposes) and how these topics impacted on logistics doctrine and training for disaster relief operations.

The next section of literature reviewed relates to subproblems one, three and four. The literature reviewed

was a British study that looked at the British military's contribution and role in disaster relief operations.

The last section of this chapter is a research methodology sample. This study served as an example of the same general methodology employed for this research paper's study of subproblems one and two.

Disaster and Disaster Relief Background

Frederick C. Cuny's superb book, "Disasters and Development" looked mainly at disasters outside the United States. This book provided an excellent overview of disasters. The book presented a detailed study covering causes and effects of the different types of natural disasters.* He also addressed the effects of the disaster on disaster relief operations itself.

Cuny included a very good description about the international disaster relief community and the effect they had on the stricken country. Coupled with this description is a detailed discussion of all the international actors in the disaster relief arena. He then covered problems within the international disaster relief system and the author provided his recommendations to improve the international disaster relief system. The book serves as a praiseworthy primer for any military officer who may have to prepare

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*The cause and effects of disasters on the land and structures in the affected area is shown in Appendix E.

disaster relief plans or possibly conduct disaster relief operations.

Related Literature to Subproblem One and Two

Logistics Principles.

Peter F. Haddad's study on "The Validity of the U.S. Army's Principles of Logistics" evaluated whether "the U.S. Army's Principles of Logistics are a valid basis for the development and application of logistics policy and doctrine in the U.S. Army."(56:3) Haddad used the principles of logistics as stated in FM 700-80 (Logistics).* He used "a representative sample from each of the National, Wholesale and Retail levels of the [logistics] system."(56:6) He then determined which of these principles were valid and which were not, based on questioning representatives of these three logistic levels. Haddad considered these principles acceptable if a majority of experts confirmed their validity at all levels of logistics (retail, wholesale, and national).

Haddad's results showed that of the nine logistics principles, all but three (generative logistics, cost effectiveness, and security) were valid. Validated were these principles: logistics intelligence, objective, interdependence, simplicity, timeliness, and impetus.

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*See Appendix F for a listing and explanation of each principle.

Haddad's study is relevant because these same principles of logistics should guide the doctrine for logistical support of disaster relief operations. As Haddad stated, "It is the principles that provide the framework within which policy and doctrine is developed."(56:10) Joint Chiefs of Staff (JCS) Publication 1-01 reinforces this statement by saying doctrine is, "[The] fundamental principles by which military forces guide their actions in support of national objectives. It is authoritative, but requires judgment in application."(14:I-12)

Logistics Doctrine For AirLand Battle.

LTC Charles C. Cannon presented in "Combat Service Support of AirLand Battle Doctrine" the doctrinal tenets of AirLand Battle. Cannon used these tenets along with the combat service support (CSS) sustainment imperatives (anticipation, integration, continuity, responsiveness, and improvisation) and discussed how they impact on CSS operations. His study addressed the current logistics doctrine that supports the U.S. Army's AirLand Battle. "AirLand Battle is the U.S. Army's doctrine for fighting the next mid to high intensity conflict."(49:54) This doctrine drives the structure of the Army's fighting and supporting organizations. Consequently, the U.S. Army's organization is based on AirLand Battle doctrine.

The study is important because it shows how CSS units are organized to support the AirLand Battle combat service

support functional areas: supply, maintenance, transportation and medical. The same unit organizations required to support the functional areas in AirLand Battle are the same units that may have to conduct disaster relief logistical support.

The study went on to show how the sustainment imperatives "relate to the tenets [of AirLand Battle] and in turn influence the sustainment system."(49:11) LTC Cannon explained that the current organization for CSS is incorrect. He said those units were developed for a linear battlefield, not the non-linear battlefield envisioned by AirLand Battle doctrine.

Cannon expected that change is likely within those organizations. In order for AirLand Battle to be better supported, CSS organizational change will be required. There are implications concerning this organizational change for disaster relief logistics. If these CSS organizations do change over the next several years, the question becomes, "Will those units be in a better or worse position to logistically support disaster relief operations in the future?"

Joint Low-Intensity Conflict Project.

TRADOC completed this formal project in 1986. The project was the first of its kind to examine critically low intensity conflict (LIC). It examined the preparedness of the U.S. Army to conduct operations in that spectrum of

warfare. The project not only defined low intensity warfare for doctrinal purposes, but it also addressed the doctrinal and structural changes the U.S. Army needed to accomplish to conduct operations in low intensity conflict.

This project categorized disaster relief operations as a subset of peacetime contingency operations which itself is a subset of low intensity conflict. The military needed to categorize disaster relief that way because there really was no other area the disaster relief mission fit into. Additionally, the disaster relief mission fit the definition of peacetime contingency because disaster relief occurs on short notice as do other peacetime contingency operations.

The project presented several logistical oriented issues. One issue that is of special importance is: "Issue F1: The use of Combat Support/Combat Service Support as the lead elements in Low-Intensity Conflict Operations."(4:F1-1)

The issue is particularly relevant because the project concluded "no doctrine or concept exists for combat support/combat service support (CS/CSS) as the supported rather than the supporting elements in low-intensity conflict." Thus, for operations where combat forces aren't needed, there is no doctrine for the use of CS/CSS units to accomplish the assigned mission. Disaster relief is one of those types of missions where a normally supporting unit is now a supported unit.

The project tasked the U.S. Army Logistics Center, now the Combined Arms Support Command (CASCOM) with developing an operational concept for the needed doctrine. Currently, no such published operational concept exists. CASCOM is developing a field manual for LIC logistics, FM 63-6. As of May, 1991, that manual was in the final draft phase and was not approved doctrine for U.S. Army use.

CLIC Papers.

The Center for Low Intensity Conflict (CLIC) at Langley Air Force Base, Virginia is a joint Army and Air Force center which publishes various papers. These papers are "dedicated to the advancement of the art and science of the application of the military instrument of national power in the low intensity conflict environment."(54:iv) Two CLIC papers are of special relevance. One paper addresses logistical considerations in low intensity conflict. The other paper is a compilation of courses and schools within the DoD concerning LIC. The researcher discusses each of these papers separately.

The paper "Logistical Considerations in Low Intensity Conflict" did not address disaster relief operations per se. It did, however, address LIC and peacetime contingency operations within LIC. The paper stated "low intensity conflict operations often require the ability to execute time-sensitive, discreet deployments."(54:3) Units supporting disaster relief operations can expect little

notice before the deployment. Consequently, those units could very well be in the process of moving their organizations to the disaster area while they are simultaneously finding out the situation in the disaster locale.

This paper presented nine principles that guide "the establishment and operation of logistical systems in LIC."(54:3)* While some of these principles don't apply to disaster relief operations, those that do could serve as a framework for disaster relief logistics.

One principle listed was especially important. The principle was: Units should make "routine use of host nation support to include local services, supplies, facilities. and transportation."(54:3) The reason this principle was important is it tells the logistician to utilize host nation support as much as possible to reduce the logistics infrastructure that must be deployed into the LIC mission area. While that principle makes sense for most LIC situations, it may be a potential problem in a disaster situation.

The problem becomes, where does the force supporting the disaster relief efforts find close in host nation (or state/local) logistic systems that haven't been damaged in the disaster? If the force going into the disaster region

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*A complete list of these principles is given in Appendix G.

isn't informed about the damage to the stricken area's logistic infrastructure, they may be expecting to contract for local logistic support that isn't available due to the disaster.

The paper closed with a caution statement for logistician planners. It read:

> The majority of logistics thinking and planning are dedicated to supporting current operations and preparing for the "big war." As a result, the LIC challenge will be met for the most part with the logistics systems, procedures, and resources that result from this "big war" thinking and planning.(54:12)

This statement further confirmed that logistical units designed for a mid to high combat environment will support disaster relief operations (a low intensity conflict operation). It'll be up to the logisticians to properly tailor the package needed for the disaster relief mission.

The second CLIC paper was "Low Intensity Conflict Education and Training Within DoD: A Compilation of Courses and Instructional Periods." The significance of this study was what it didn't say. The study identified 34 courses covering low intensity conflict that are taught in U.S. Army school centers. Not one of the course syllabi reviewed by the author mentioned disaster relief operations. The importance of that was the U.S. Army education system does

not conduct any formal instruction covering disaster relief operations.

Related Literature to Subproblems One, Three, and Four

In 1990, Brigadier G.B.L. Campbell of the British Army prepared a paper for the Royal College of Defence Studies titled, "Disaster Relief Overseas--British Military Involvement." Brigadier Campbell's study found that the British Forces does not have a formal policy for their use in disaster relief operations, even though those forces have conducted such operations in the past. He states "commanders are often ignorant of the relief system." (49:ii) Campbell called on the British Forces to adopt mandatory officer education explaining how the British Forces fit into domestic and foreign disaster relief operations. He felt that officers, while attending their appropriate level staff courses, should be exposed to disaster relief organizations and the role of British Forces in support of those organizations. However, Campbell did not call for disaster relief support training for units in the British Forces.

Brigadier Campbell assessed the United States and the DoD's disaster relief support procedures compared to the British Forces. He concluded that the "US has made considerable progress in the way it harnesses the assets of the Pentagon for the benefit of the State Department's Disaster Assistance Office [OFDA]."(49:ii) He commented

that some within the British military view the United States' system of using military resources and interface with OFDA and FEMA as the ideal system for the British to adopt.

Campbell's study didn't address two areas. He did not discuss logistical operations in support of the British Forces conducting disaster relief missions. Nor did he discuss any failed or less than successful disaster relief operations (if in fact there were any) conducted by the British Forces.

Research Methodology Sample

A research paper that served as an example for a doctrinal study methodology was "Rear Operations Doctrine: A Search for Doctrinal Consistency Within the Combat Service Support Field Manuals" by Clubbs and Mills. The study used "the descriptive research method, employing both objective and subjective content analysis techniques."(51:i) This study looked at many different sources of CSS doctrine and determined whether that doctrine remained consistent through out the many field manuals examined.

The study method was relevant because the search for current logistics doctrine for disaster relief support operations (subproblem one and two) followed a similar methodology. While this author didn't follow Clubbs and Mills' methodology exactly, it did serve as a base line for the formulation of this study's methodology.

Summary of Related Literature

Cuny's book "Disaster and Development" was an excellent source for the reader to gain some background information covering disasters and their causes. The book skillfully covered the phases of disaster relief operations and who the international governmental and non-governmental players were.

Covered next was related literature addressing subproblem one and two. The researcher reviewed several studies that covered the principles and doctrine encompassing logistical operations within the U.S. Army. Because the doctrine for logistical support to disaster relief operations is but a subset of larger doctrinal divisions, these umbrella doctrines were mentioned. The force structures and organizations are also relevant. Because these organizations are based on AirLand Battle doctrine and not on low intensity conflict or disaster relief doctrine, these same organizations must support disaster relief operations.

The TRADOC project was very important because this project categorized disaster relief as a subject within low intensity conflict and peacetime contingency operations. It was also important because it stated that the U.S. Army didn't have any logistics doctrine for low intensity conflict.

The first of two CLIC papers presented some principles for logistics in low intensity conflict. It stated there would be little time for prior notification before low intensity conflict operations were executed. The second paper showed that within the U.S. Army's formal education system, there aren't any courses that address disaster relief operations.

Following those papers was a study prepared by Brigadier General Campbell (British Army) which related to subproblems one, three and four. Campbell's study showed that other countries look at the United States and DoD disaster relief support structure as a model to emulate. While his study didn't address logistical support for disaster relief, it did state that British officers should be educated concerning disaster relief operations.

Lastly, the researcher presented an example doctrinal study methodology. This methodology was suitable for the study of subproblems one and two by the researcher.

CHAPTER 4

Results of the Study

Introduction

The purpose of this chapter is to present the results of the research process. The findings are presented according to the subproblems that were originally presented in Chapters 1 and 2.

Subproblem One

Subproblem One asked, "What is the Army's logistics doctrine for units conducting disaster relief operations?" Three Army field manuals provide the basic doctrine for general logistics doctrine, and within these manuals are some doctrine sections devoted specifically to disaster relief operations. These three manuals are: 1) FM 100-10, Combat Service Support, 2) FM 700-80, Logistics, and 3) FM 701-58, Planning Logistics Support for Military Operations.

In addition to these three manuals, regulatory guidance is provided by two Department of Defense (DoD) directives and one Army regulation.

Finally, a future doctrinal field manual is currently under development by the Combined Arms Support Command (CASCOM) at Ft. Lee, VA. The new manual addresses logistical operations in low intensity conflict (LIC). All of these doctrinal and regulatory sources provide some input towards the logistics doctrine for disaster relief operations.

FM 100-10 (Combat Service Support).

This manual provides the overall umbrella doctrine for all logistical operations within the Army. The manual specifies that there are six combat service support (CSS) tasks within the Army. These tasks are: 1) manning, 2) arming, 3) fueling, 4) fixing, 5) moving, and 6) protecting. Any military logistical operation will consist of one of these tasks.

The manual also addresses sustainment imperatives, which serve to guide the logistician in conducting CSS operations. These sustainment imperatives are: 1) anticipate, 2) integration, 3) continuity, 4) responsiveness, 5) improvisation.* The purpose of these imperatives is to guide the logistician in his planning and execution. They further remind him that logistics is a constantly fluid and changing operation, and the logistician must always remain flexible and aware of the current situation.

FM 100-10 does suggest three guidelines for contingency operations (such as disaster relief operations). Those guidelines are: "1) tailor the package for the mission, 2) arrange for contracting early on, and 3) use local resources."(17:2-15) The manual doesn't address

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*See Appendix H for definitions of CSS tasks and sustainment imperatives.

LIC at all, nor does it mention any thing about supporting disaster relief operations.

FM 700-80 (Logistics).

This manual provides overall guidelines for the Army's logistical support. As the manual states in its purpose paragraph, "The purpose of this manual is to provide a reference on Army logistics management doctrine."(19:1-1) It further states the manual is targeted to the logistician at the major command level and above (i.e. FORSCOM, Army Material Command, Training and Doctrine Command [TRADOC], etc.). "This manual provides logistics guidance for commanders and logistics staff officers of the organizational levels stated above in the same vein that field manuals (FMs) of the 100 series provide guidance to the major tactical commanders...on how to fight."(19:1-1)

FM 700-80 provides the logistical principles that guide logistical planning and operations (see Appendix F). The manual also devotes a chapter to planning logistics support for military contingency operations. In that chapter, the manual states, "The essence of logistics planning involves the determination of supply, services, transportation, maintenance, construction, and related logistics requirements, and the determination of existing capability to meet these requirements."(19:5-1)

The manual further goes on to describe how Joint and Army planning is conducted. The manual also discusses the

Army's support for disaster relief and civil disturbance operations. The disaster relief section states that AR 500-60 guides US Army involvement in disaster relief operations. The section briefly describes situations when the Army may be called upon to provide assistance in both domestic and foreign disasters relief operations. The final paragraph of FM 700-80's disaster relief section discusses planning logistic support for disaster relief operations.

The manual states:

> The types of support required will vary according to type and intensity of damage, local facilities, density of population, and warning received. Logistics support most likely to be requested includes:
>
> (1) Evacuation, housing, and feeding.
>
> (2) Care of injured.
>
> (3) Supply of clothing, food, and medical supplies.
>
> (4) Water purification.
>
> (5) Emergency communications support.
>
> (6) Physical security.
>
> (7) Fuel for cooking, heating, and transport.(19:5-18)

This list isn't completely accurate. The researcher questions whether emergency communications support mission is a logistics mission. Additionally, the list apparently ignores the recurring requirement for the Army to provide

transportation support during disaster relief missions. The physical security mission seems appropriate, given FM 100-10 states one of the CSS tasks is protecting the force.

FM 701-58 (Planning Logistics Support for Military Operations).

FM 701-58 has the same target audience as does FM 700-80. That audience consists of the "commanders and staff officers at major echelons and planning agencies of Army component commands of unified commands, and of major Army commands (MACOMs) which provide logistics support to these Army component commands."(23:1-1) The scope of the manual is to "describe logistics planning to support various emergency plans; e.g., contingency, war emergency, force mobilization, continuity of operations, civil defense, *disaster relief* (italics author's own), civil disturbance, and others."(23:1-1)

The manual reviews FM 700-80's logistics principles and overall training responsibilities of the component commander. The manual devotes a chapter to military assistance to civil authorities. In this chapter, the manual describes various emergencies, including natural disasters and major disasters.*

*The only difference between the two types is a major disaster warrants federal assistance to the local and state governments, while a natural disaster is handled by the local governments.

The manual further describes DoD policy regarding military assistance for disaster relief as well as responsibilities for disaster relief assistance. Some organizations listed are the Army, the Army Corps of Engineers (USACE), the Army National Guard, Joint Chiefs of Staff (JCS), and various federal and civic agencies. One federal disaster relief coordinating agency not mentioned is the Office of Foreign Disaster Assistance (OFDA). Apparently the manual is primarily focused on domestic disaster relief operations and makes little reference to foreign disaster relief operations.

The manual goes into a fairly detailed discussion about the concept of support and logistical support for troops committed to emergency operations (including disaster relief support). The manual even recommends basic loads for difference classes of supply and when various field services should be established for the deployed forces. The manual also describes reimbursable expenses incident to emergency operations. The manual has extracted from Army regulation 500-60 (Disaster Relief) those reimbursable expenses units can submit through DoD for supporting disaster relief operations.

The manual does the best job of these three manuals in providing specific planning guidelines for disaster relief operations. An omission in the field manual is it doesn't address the specific disaster relief missions that Army

forces may be called upon to perform. Nor does it discuss the unique environment (military forces operating side-by-side with civilian agencies) that exists during a disaster relief mission. The manual does mention that military forces will be under the operational control of the disaster control officer (DCO) and not reporting directly to another federal agency. However, the manual doesn't explain the role or purpose of the DCO or what organization is responsible to provide the DCO.*

Disaster Relief Directives and Regulations.

There are three primary directives or regulations controlling US military forces in disaster relief support.

DoD directive 3025.1. This directive covers DoD support for domestic disasters. This directive is very general in detail. It gives broad guidelines to the services concerning their responsibilities in support of disaster relief assistance operations. The directive does talk in general terms concerning funding matters and the procedures for requesting reimbursement from the Federal Emergency Management Agency (FEMA) for military support provided to FEMA.

DoD directive 5100.46. This directive covers DoD support for foreign disasters. Like DoD Directive 3025.1,

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*The DCO is an O-6 military officer who is responsible to work directly with the Federal Coordinating Officer (FCO) from FEMA. The DCO advises the FCO on the best use of military resources to support FEMA's mission.

it is very general in its guidelines with few specific guidelines (especially regarding funds reimbursement for DoD support).

Army regulation 500-60. This regulation addresses the Army's procedures for supporting both foreign and domestic disaster relief operations. The regulation is more specific than the two DoD directives, especially regarding when disaster relief support may be given and responsibilities for that support. AR 500-60 states that Army funds will not be used for conducting disaster relief support unless that support is reimbursable from FEMA or OFDA. The regulation then provides fairly detailed procedures for requesting reimbursement of those funds expended for supporting disaster relief operations.

FM 63-6 (Combat Service Support in Low Intensity Conflict)(Draft).

This field manual is under development, consequently it is not approved doctrine for use by the Army. The researcher mentions this manual because it is the only emerging manual that addresses disaster relief in terms of logistics doctrine and low intensity conflict (LIC).

The Army has included disaster relief operations as a subset of low intensity conflict. Consequently, any new information concerning disaster relief operations would most likely be covered within a low intensity manual. It appears

the Army does not believe the subject of disaster relief operations warrants its own doctrinal manual.

The logistics doctrine in the LIC manual is being prepared by the Echelons Above Divisions Department, Logistics Doctrine Division, at the Combined Arms Support Command (CASCOM), Ft. Lee, VA. The author, the subject matter expert (SME) for logistics in LIC, devoted less than one page to disaster relief operations. She mentioned several missions CSS units may perform for disaster relief support, but failed to discuss the operational environment those units will provide their logistical support in. The only Army literature reference (concerning disaster relief) she mentioned was AR 500-60. She didn't use pertinent disaster relief information in both FMs 700-80 and 701-58. The SME felt these manuals weren't current and relevant logistical field manuals.(61)*

Both the SME and her immediate supervisor, felt that disaster relief was a peacetime mission, and CASCOM focused its energies to develop logistics doctrine for wartime missions.(61) Consequently, both saw little pressure to place more material or detail into FM 63-6 concerning disaster relief operations. These individuals agreed that disaster relief is a CINC mission. The SME stated, "There

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*They are six and four years old respectively.

isn't sufficient logistics doctrine to support the CINC's missions, but do we need more?"(61)

As of May, 1991, a final version of FM 63-6 had a doubtful existence. The SME wasn't sure whether the manual would be printed, or whether the material would be incorporated in another field manual, which was not specified.

Summary.

There are several current doctrinal manuals covering logistics for disaster relief operations. All of the manuals address the mission in a broad manner, with FM 701-58 providing the most detailed procedures for commanders and staff to utilize in accomplishing the mission. Unfortunately, few experts were aware of the existence of FM 701-58. Regulatory guidance was provided by Army regulation 500-60. It is a fairly detailed regulation, and provides an acceptable amount of information for active Army units' use. The DoD directives are too general in their guidance to be much help to the CINC staffs that must use them. Emerging doctrine doesn't appear to provide anymore specificity for disaster relief logistics doctrine than does the existing doctrine. The only advantage to an emerging field manual is that it has a 63 series number on the FM title, meaning it's a "how-to-fight" publication. Consequently, it might enjoy a wider audience within the Army than FMs 700-80 and 701-58.

Subproblem Two:

Subproblem Two asks, "What is the Army's policy concerning units conducting disaster relief training?"

Regulations/policy.

The researcher couldn't find any regulations, either Department of the Army or Department of Defense that provided for or prohibited units to conduct training for disaster relief missions.

AR 500-60 does mention that, "Funds for disaster relief are not programmed in the Army's budget. Fund reserves are not held for disaster relief."(27:5-1) These statements mean that any monies spent on disaster relief training would have to come from Army operational funds. FEMA and OFDA reimburse the Army only for the support provided for a disaster relief operation.

Army Focus, an official Army publication produced semiannually, outlines the Army's policies concerning many topics. The publication gives "...an official Army position or policy on a subject of enduring importance or whose current relevance merits wide Army and public awareness." (75,1) One topic it comments on is disaster relief training. The publication states the Army's policy concerning disaster relief training is: "With the exception of riot control training, units do not conduct specialized training for potential civil missions (e.g. disaster

relief). Normal Army training adequately prepares soldiers and units to accomplish tasks that may be required."(75:12)

National Guard Policies.

While the scope of this study did not include a complete sampling of the National Guard concerning their training policies, some expert comments were pertinent because the Army regulations and policies apply to the National Guard while they conduct federal operations or training. Because of limited funds and time, representatives from only two state national guard offices were queried. Nevertheless, it is important to include the National Guard into the findings concerning training because these forces use the Army's training doctrinal manuals to support their training programs. Their officers are also trained in the same officer training courses as are the active duty officers. The National Guard is important to look at, because the National Guard must respond (under state control) to a disaster before federal assistance is requested by the state.

The National Guard representatives were from the states of Virginia and Alabama. The representatives indicated they did not conduct specific training for logistical support for disaster relief.(62 and 68) The representatives said the training their units received for supporting civil defense training was adequate for conducting logistical support for disaster relief operations. In the case of Virginia, this

statement was borne out by a review of six After Action Reviews (AARs) on disaster relief operations conducted within the state in the last twenty years. Only one AAR stated that civil defense training didn't provide comparable training for disaster relief operations. That same AAR did state the unit accomplished their mission with only minor logistical problems (success with shortcomings).* None of the AARs had any significant logistical problems (four AARs mentioned no logistical problems).(37-42)

Regional CINC's Policies.

USCINCSOUTH in Panama and USCINCLANT at Norfolk, VA differ concerning their published instructions concerning disaster relief training. SOUTHCOM states in their disaster relief plan that the "...subordinate commands and forces should be identified and deployment/employment preparations and training conducted."(83:3) Later in the plan, SOUTHCOM directs the Commander, US Army South (USARSO) to, "Establish, train, and maintain a core of key individuals for the DARF (Disaster Assistance Relief Force)."(83:8) LANTCOM does not mention any unit or individual training requirements in either its domestic or foreign disaster relief plans.(86 and 87)

This difference in each command's training views was also expressed when the researcher discussed training with a

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*See page 24 for definitions of success with shortcomings.

representatives who either were assigned or had been assigned to the CINC's staff. COL Hill stated SOUTHCOM regularly tried to incorporate USARSO into training exercises, specifically to increase their proficiency in responding to disaster relief situations.(71) LTC Mitchell, from LANTCOM, stated that LANTCOM desired to conduct disaster relief training exercises and then use these forces for humanitarian support in the country they deployed to. LTC Mitchell indicated LANTCOM had difficulty in getting authorization to conduct those types of exercises.(66)

The third regional CINC that the researcher spoke with was USCINCFOR. FORSCOM (in conjunction with FEMA) does conduct a one week course specializing in training for disaster relief and mobilization.(75) However, MAJ Parham didn't mention any specific exercises run under FORSCOM's direction. He did say that the Continental Army Commands do run some command post style disaster relief exercises for their staffs.

Other than the CINCs and the various Continental Army Commands, there was little evidence of any other training for personnel responsible for disaster relief operations below the MACOM level.

One anecdotal incident shows the effect of not having any generalized disaster relief training base within the Army. An Army logistics action officer had been serving on one of the CINCs staff for only 30 days when he had to

coordinate logistical actions in support of the relief efforts resulting from Hurricane Hugo.(72) Based upon his experiences, he expressed a need for some general instruction covering disaster relief support. He felt the instruction should include a discussion of the key players (military and civilian) and their responsibilities during disaster operations. He felt if he had received such an overview, it would have greatly increased his initial proficiency in his position. He stated that the instruction should be given in both the resident and non-resident Command and General Staff College. By providing the instruction at that level, the future Joint and Army staff and unit commanders would be exposed to disaster relief operations.

Further Expert Comments Concerning Training.

In addition to the above mentioned experts, there are two other experts who have been actively involved in disaster relief operations within the Army. One of these experts was Mr. Gary Campbell, from the US Army Corps of Engineers (USACE). The other expert was LTC Willhouse, from the Directorate of Military Support, Department of the Army Staff. Mr. Campbell was responsible for supervising USACE emergency operations from their headquarters in Washington D.C. LTC Willhouse was a member of the Army staff who

oversaw the DoD execution of domestic disaster relief operations.*

Unit and leader training. Both of these experts agreed that small unit (platoon, company and battalion) wartime missions and the training for those missions remained principally unchanged when supporting disaster relief operations. A transportation company drives its trucks in war or in a disaster relief. A petroleum company dispenses and stores fuel. What is different is the environment under which the unit is operating. In a disaster relief operation, the units are operating arm in arm with civilian organizations and businesses to provide disaster relief support for the afflicted area. The experts agreed there are leader tasks in recognizing that this unique environment exists and that the environment is different from wartime. The leader must understand this new environment and how his unit works within the disaster relief system in order to be as efficient as possible.

LTC Willhouse did state that fire fighting was the one disaster event where training was currently authorized. However, all of the training costs and responsibilities to conduct the training were borne by the Departments of Agriculture and Interior.

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*The Army staff serves as the executive agent for DoD for domestic disaster relief operations.

Mr. Gary Campbell, from USACE, acknowledged during the disaster relief effort following Hurricane Hugo, some of the tactical engineers who supported USACE had problems clearly understanding the new command relationships and the units' interface with USACE. These problems didn't have a direct bearing on logistical support, but the problems still existed at the leader level.(73)

Urban search and rescue (USR) mission. One area where unit training will be required by the Army is to support the Urban Search and Rescue (USR) mission.* Under a newly revised FEMA Federal Natural Disaster Response Plan, DoD is primarily responsible for Emergency Support Function #9, Urban Search and Rescue. Most likely the Army will have two brigade equivalents of soldiers (one on each coast) who will be trained to respond to FEMA's USR requests through DoD and the Army. LTC Willhouse stated that these organizations would require specialized training and equipment. He further stated that the training and equipment would be funded separately from the Army's operational funds.(65)

The addition of the USR mission is important because changes will be required concerning the public policy about training for disaster relief. These changes may not be major, but at least the policy of no training for disaster relief operations will have to be modified to some extent.

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*According to LTC Willhouse, Military Engineer in the Directorate for Military Support (DOMS).

AAR Comments on Disaster Relief Training.

The researcher reviewed fifteen AARs from units that participated in disaster relief support operations. [See Table 1.]

Of the five units that reported negative comments about training, four of these units focused on training for disaster relief operations. The Virgin Islands National Guard's (VING) training deficiencies were focused on their ineffective civil disturbance training posture. SOUTHCOM's training deficiency centered on the US Army South's Emergency Operations Center (EOC). Apparently there were problems in the EOC concerning the procedures on how to handle a tasking from SOUTHCOM concerning a disaster relief operation and how to activate the Disaster Relief Readiness Force to respond to that disaster.

The South Carolina National Guard's training problems were principally individual soldier training deficiencies. Soldiers improperly maintained their equipment, or were not properly trained on the equipment they were using.
The 116th SIB (Virginia National Guard) felt that civil disturbance training was ineffective in preparing the unit to respond to a disaster relief operation.* The unit,

*This observation is countered by three other Virginia National Guard unit AARs which said civil disturbance training was effective in preparing the units to respond to a disaster.

unfortunately, didn't elaborate in the AAR on what training it felt should be conducted.

Disaster Event	Unit AAR Referenced	Mission Success/ Failure	# of Neg Training Comments
Hurricane Hugo	VING	Failure	1
Hurricane Hugo	SCNG	SWS*	3
Mexico City Earthquake	SOUTHCOM	SWS	1
Columbian Volcano	Hqs, 210th CAB	SWS	0
Columbian Volcano	Hqs, 193th Inf Bde	SWS	0
Hurricane Hugo	USCINCLANT	SWS	0
Hurricane Agnes	Hqs, 176th Eng Group	Success	0
Hurricane Agnes	D Co, 103d Eng Bn	Success	0
Hurricane Agnes	VANG	SWS	0
Flood Duty 1985	Hqs, 3-116th Infantry	SWS	0
Flood Duty 1985	Hqs, 176th Eng Group	Success	0
Flood Duty 1985	Hqs, 116th Sep Inf Bde	SWS	1
Hurricane Hugo	24th Inf Div	SWS	0
Hurricane Hugo	COMFAIRCARIB	SWS	0
Hurricane Hugo	XVIII Corps	Success	1

*SWS stands for success with shortcomings. This means there were some difficulties, but mission accomplishment was achieved.

Table 1 Training AARs Assessments

The XVIII Airborne Corps' comment about training concerned the unit's lack of familiarity with the various disaster relief organizations and how they operated. XVIII Airborne Corps felt they needed at least an officer and an NCO trained on disaster relief operations and preparedness

measures in order to be able to interface better with these non-DoD agencies.

These comments are important because they indicate that the current Army policy about not conducting any training for disaster relief operations did cause some loss of the unit's effectiveness in some disaster situations. Because the frequency of disaster relief support is low, when a disaster does occur, the units need to be fully prepared to support the disaster relief effort from the beginning. The payoffs and positive image that can be created by the Army is very high, if the units are successful in their mission support operation.

Summary.

The published Army policy concerning disaster relief training is focused at the unit level. The Army stated that units will not train for disaster relief support missions. However, at least one regional CINC required its Army component to conduct some training focused on disaster relief operations. Another CINC would have liked to conduct such operations, but had received guidance that they could not conduct disaster relief training exercises with follow-on humanitarian relief efforts. A significant number of the experts interviewed felt that all field grade officers could use some familiarization training concerning disaster relief operations. This training was considered important in order to expose those field grade officers to the organizations

that operate within the disaster relief arena and how DoD supports disaster relief efforts. There was evidence that the CINCs and the Major Army Commands (MACOMs) did conduct some formal individual training, but that the training was unique to each command. The most formal course was taught by FORSCOM with FEMA providing some assistance. Unit AARs showed at least some instances where there were training deficiencies in conducting disaster relief operations. In one case, the XVIII Airborne Corps felt they needed to train one officer and NCO concerning disaster relief operations and agencies the Corps would interface with in conducting these operations in order to increase the unit's effectiveness.

Subproblem Three

Subproblem three is the key subproblem question in this research paper. The subproblem asks, "What influence did logistics doctrine have on the performance of the Army units conducting disaster relief operations?" These findings will combine the effect of both general logistics doctrine and the effect of specific logistics doctrine for disaster relief.

Disaster Relief Logistical Doctrine Impact.

The researcher desired to have actual unit input into the primary data. This was accomplished by using after-action reports. The after-action reports were desirable because these reports are usually prepared shortly after the

disaster support ends. The second reason AARs were desired was based the inability of the researcher to talk with specific units (and their members) that had participated recently in disaster relief operations. These units had been deployed for Operation Desert Shield/Storm, consequently the researcher couldn't conduct personal interviews. Thus, the AARs are the primary unit level data available that the researcher could use.

Review of after action reports. After reviewing fifteen AARs [see Table 2] from both domestic and foreign disasters, there wasn't any consistent trend concerning the unit's logistical shortcomings in accomplishing their disaster relief mission(s). Almost every organization indicated some logistical shortcomings. However, none of the units indicated they had a logistical problem resulting from a knowledge deficiency about disaster relief logistics doctrine.

Based on one of the researcher's assumptions (that unit AARs will address strengths and weaknesses of the units performance), the researcher expected a unit to comment on any and all deficiencies they encountered in conducting disaster relief operations. Because none of the AARs included any comments about a void in logistics doctrine that negatively impacted on their support for disaster relief operations, the researcher concluded that the units understood how to logistically support the mission. The

data showed the shortcomings that occurred resulted from the unit not performing that task as well as they should have. This indicated to the researcher a lack of training proficiency, instead of a logistics doctrinal deficiency.*

Disaster Event	Unit AAR Referenced	Mission Success/ Failure	# of Neg Logistics Comments
Hurricane Hugo	VING	Failure	5
Hurricane Hugo	SCNG	SWS*	10
Mexico City Earthquake	SOUTHCOM	SWS	3
Columbian Volcano	Hqs, 210th CAB	SWS	2
Columbian Volcano	Hqs, 193th Inf Bde	SWS	1
Hurricane Hugo	USCINCLANT	SWS	1
Hurricane Agnes	Hqs, 176th Eng Group	Success	0
Hurricane Agnes	D Co, 103d Eng Bn	Success	0
Hurricane Agnes	VANG	SWS	1
Flood Duty 1985	Hqs, 3-116th Infantry	SWS	1
Flood Duty 1985	Hqs, 176th Eng Group	Success	0
Flood Duty 1985	Hqs, 116th Sep Inf Bde	SWS	1
Hurricane Hugo	24th Inf Div	SWS	7
Hurricane Hugo	COMFAIRCARIB	SWS	5
Hurricane Hugo	XVIII Corps	Success	0

*SWS stands for success with shortcomings. This means there were some difficulties, but mission accomplishment was achieved.

Table 2 Unit AARs Assessments

*See Appendix I for generalized logistics comments taken from each unit AAR analyzed for this research paper.

Review of expert interviews. All of the experts, who commented about the Army's logistical doctrine for disaster relief, felt that the existing available logistics doctrine was adequate.

Summary.

The data showed that logistical deficiencies in disaster relief support operations were not attributed to any doctrinal deficiencies, but instead were attributed to training shortfalls. Consequently, subproblem three is best answered by stating that current logistics doctrine has not hampered units in conducting disaster relief support operations.

Subproblem Four

Subproblem four asks, "Have Army units satisfactorily supported disaster relief operations? If not, was logistics one of the reason(s) why they are not successful."

As shown earlier, Army units have satisfactorily supported both domestic and foreign disaster relief operations in almost all instances. However, this success hasn't been without some problems. Based upon the researcher's analysis of unit AARs and expert interviews, the researcher concluded that the unit's logistical problems were not attributed to deficiencies with the existing Army's logistics doctrine.

Other Unit Problems in Supporting Disaster Relief Operations.

AAR comments. The researcher's analysis of unit AARs determined one unit failed in its disaster relief support operations. The failure was attributed to the VING and their disaster relief support efforts following Hurricane Hugo's devastation on the Virgin Islands in September, 1989. In this apparently unique situation, it was difficult to determine whether the unit's failure was attributed to one or more specific causes.

From the information available to the researcher, there appeared to be multiple reasons the VING's was unable to properly support their islands' relief efforts. One cause was the widespread destruction that Hugo wreaked on the islands. In an open letter to the Virgin Islands, the VING tried to explain their ineffective relief response. They stated: "This was the worst disaster of our short 17 year existence; more devastating than anything in our wildest dreams or in the history of the US Virgin Islands."(91:2) The VING went on to say that because of the extensive damage to VING facilities and equipment, the VING was limited in its ability to initially assist the islands.

Another problem for the VING was the mass absence without leave problem within the VING. Over 50% of the VING's personnel failed to report for duty immediately following the hurricane's destruction of the islands.(33,25)

Such a shortage of people dramatically limited the effectiveness of the unit's response efforts.

The VING claimed they had properly planned and prepared for the disaster. But, according to the VING, the disaster was much more severe than they were prepared for. Consequently, in the VING's view, they were at the mercy of the hurricane and could have done nothing more in terms of preparedness and their subsequent relief efforts. The researcher disagrees with that view based on interviews with several experts.

Because of these three interdependent factors, it was difficult for the researcher to state with certainty the exact cause of the VING's logistical support failures in their disaster relief operation. In all likelihood, each of the factors had a significant effect and the combination of the three precipitated the VING's failure in accomplishing their relief efforts satisfactorily.

Expert interview comments. Several of the experts indicated there were other problems in disaster relief support operations other than logistics support doctrine. Examined next are some of these problems the experts experienced in supporting disaster relief operations.

Command and control. COL Hill (former member of the USCINCSOUTH's staff) felt the problems he encountered were mainly due to the inability of the US Army South's (USARSO) command and control structure to properly execute the

existing guidance and doctrine that was available to them. The fact that USARSO's units failed to follow proper procedures and failed to execute specified directives properly, caused him several problems.(75)

SOUTHCOM had one incident where the command delivered the incorrect amount of relief supplies to a stricken country. This embarrassing situation occurred because the USARSO support group (which operated the warehouse where the relief supplies came from) failed to verify the proper amount of supplies originally requested by SOUTHCOM was the same amount of supplies they shipped. In another situation, an aviation unit failed to comply with their mission guidance in supporting a disaster relief operation and supplied an incorrect number of aircraft. The unit chose to deploy their own number of aircraft (which was less than the number requested). The problem became greater when the unit had to use some of the specifically identified disaster relief aircraft to provide maintenance support for the unit's not mission capable aircraft which hadn't even been requested by SOUTHCOM and OFDA. All of this resulted in substandard support for the disaster relief mission the unit was tasked to provide assistance for.

Funds reimbursement procedures. Both LTC Mitchell and MAJ Saylors had problems due to unclear procedures concerning the handling of requests for reimbursement of funds from

FEMA. Each of these individuals looked at the same problem from a different organizational perspective.

LTC Mitchell saw the problem from the DoD level. MAJ Saylors, in turn, saw the problem from the state national guard level, especially once the Guard had been federalized for a disaster relief effort. LTC Mitchell's problem was directly related to the lack of specific guidance in DoD Directive 3025.1 and 5100.46.(71)

MAJ Saylors' problem revolved around the difficulty in tracking different types of money and getting the reimbursement monies back into the appropriate fund. Some of the assets the Guard used in the disaster relief support were purchased using state monies (i.e. fuel), while the remainder of the funds expended were federal monies. His difficulty was in finding the guidance on how to separate the reimbursement requests based on state and federal monies. MAJ Saylors felt that better funding instructions were needed for assisting national guard units in getting reimbursed for both federal and state monies expenditures.

Lack of an Army disaster relief "how-to" manual. COL Hill asked why couldn't the doctrine community (TRADOC) produce an all-encompassing manual focused on disaster relief and humanitarian assistance. COL Hill felt that TRADOC should produce such a manual and it should cover all aspects of disaster relief operations. COL Hill envisioned this manual would be similar in scope to the Infantry school's manual

produced for combat in built up areas. The Infantry school used their infantry doctrine as a base and then prepared a manual focused exclusively on the mission requirements for combat in built up areas.

The researcher discussed this proposed manual with CASOM's LIC logistics subject matter expert and her supervisor. They felt that such a manual might be needed, but they weren't sure who would be responsible for it.(71) The researcher found that they both held the opinion that if the disaster relief support mission wasn't a war-time operation, then they didn't attach much importance to the mission, even if it was a CINC assigned task. Their opinion was reinforced by the genuine lack of joint manuals that discuss disaster relief operations.

FORSCOM had prepared a situation manual for use in their Joint Command and Readiness Program. The manual was called, Miliatry Assistance in Civil Emergencies. This manual (while it only addressed domestic emergencies) provided an excellent baseline for a manual covering disaster relief support. The manual addressed missions, command and control and procedural responsibilities.

Joint Disaster Relief Guidance.

Because the CASCOM LIC logistics SME and her supervisor stated they had a lack of joint disaster relief guidance, a review of the existing guidance was needed. A survey of existing draft joint manuals showed that information

concerning disaster relief was totally omitted from key joint manuals.* The purpose of the these manuals is to guide the CINCs and the services in conducting joint operations and training. MAJ Gabriel stated that the joint doctrinal literature was totally void of any coverage of disaster relief operations. This has caused him some problems, because there was no doctrine to guide the LANTCOM's staff in conducting disaster relief operations.(76)

Based on this doctrinal void, Army doctrine writers use this omission as an excuse not to develop a doctrinal guide for disaster relief operations.(71) Consequently, CASCOM hasn't developed any detailed disaster relief doctrine because the joint doctrine writers haven't developed their joint doctrine yet.

Summary.

Based on the research for subproblem four, the researcher believes that the existing logistical doctrine is adequate for disaster relief operations. Furthermore, the researcher believes there is a need for some form of centralized guidelines for disaster relief at the Army level. That belief is based on the command and control and funding problems that have occurred in more than one instance. The researcher couldn't find any centralized

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*These manuals are JCS Pub 3-07 (Joint Operations in Low Intensity Conflict) and JCS Pub 4-0 (Joint Logistics).

listings of unit lessons learned and successful tactics, techniques and procedures. The researcher believes that a single source disaster relief document, if produced by TRADOC, would be able to provide successful tactics, techniques, and procedures that have been successfully used in disaster relief operations.*

With such a document, any unit would have a single reference to use when participating in disaster relief operations. Such a manual probably would have proven beneficial to an infantry battalion tasked to support disaster relief efforts following Hurricane Hugo. The battalion was tasked to operate a series of distribution warehouses for receiving and shipping relief supplies of food and clothing in downtown Charleston, South Carolina. Given the uniqueness and vagueness of this type of mission, any reference material the unit could have used could only have helped the tasked unit to accomplish their assigned mission. As it was, the unit was successful, but the process of getting there could have been smoother.

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*See Appendix J for a bulletized list of some tactics, techniques, and procedures gleaned from various unit AARs and expert comments.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

Problem.

The study was undertaken based on problems two field grade officers had had in conducting disaster relief operations. Their problems included potential problems with the Army's logistics doctrine for disaster relief operations. The potential problem was reinforced by the 1986 Joint Low Intensity Conflict Study which stated there was "no doctrine for combat support/combat service support as the supported rather than the supporting elements in low-intensity conflict."(4:F1-1)

Based on these problems, the researcher's purpose to analyze the US Army's logistics doctrine for units that conduct disaster relief operations and determine whether the doctrine provides the framework needed for units to successfully support disaster relief operations. In order to accomplish the stated purpose, four subproblems were formulated. These subproblems were: 1) What is the Army's logistics doctrine for units conducting disaster relief operations? 2) What is the Army's policy concerning units conducting disaster relief training? 3) What influence did logistics doctrine have on the performance of the Army units conducting disaster relief operations? 4) Have Army units

satisfactorily supported disaster relief operations? If not, was logistics one of the reason(s) why they are not successful.

Methodology.

The research data was collected from three primary sources. The first source of data was interviews with eleven experts in disaster relief operations and logistics doctrine. Additional primary data was collected from fifteen after action reports (AARs) from units that had conducted disaster relief operations. These AARs covered both domestic and foreign disasters and active and national guard organizations. The third source of primary data was current logistics field manuals and Army regulations and Department of Defense (DoD) directives. The researcher than analyzed the data and answered the four subproblem questions.

Major Findings

Existing Logistics Doctrine.

Two field manuals, FM 700-80 (Logistics) and FM 701-58 (Planning Logistics Support for Military Operations) provide the only logistics doctrine concerning logistic support for disaster relief operations. FM 700-80 provides broad coverage of the topic by listing some general missions Army forces may be called upon to perform in a disaster relief role. FM 701-58 provides greater coverage of disaster relief support. The manual includes a fairly detailed

discussion about the concept of support and logistical support for troops committed to disaster relief operations.

What both of these manuals fail to address is the unique environment that the military forces are operating in. The environment is unique because the Army forces are supporting specific mission requests of the Federal Emergency Management Agency (FEMA) or the Office of Foreign Disaster Assistance (OFDA). The manuals also do not discuss the unusual command and control relationships that exist in disaster relief operations. FM 701-58 provides no additional assistance than Army Regulation 500-60 (Disaster Relief) concerning the procedures for the reimbursement of funds. Also missing from these manuals are constructive logistical and operational unit lessons learned from previous disaster relief operations.

Based on expert interviews, it appears that few of the experts are familiar with these manuals, consequently its reasonable to assume most of the units in the field also aren't familiar with these manuals.

DoD directives 3025.1 (Use of Military Resources During Peacetime Civil Emergencies within the United States, its Territories, and Possessions) and 5100.46 (Foreign Disaster Relief) provide very broad and general guidance to the services and the CINCs. These directives lack specificity that is needed by the CINC's staffs who have to execute these disaster relief support missions. AR 500-60 (Disaster

Relief) covers the specifics of conducting disaster relief operations for Army units. Both domestic and foreign disaster relief support are addressed as well as funding reimbursement procedures for units. The regulation covers command responsibilities, but doesn't address the "how" to execute portion of disaster relief operations.* All of the directives or the regulation lack the specificity required concerning reimbursement of funds for joint operations and federalized national guard support for disaster relief operations.

Training Policies.

The Army's training policy concerning disaster relief is that units *will not* train for disaster relief support operations. The Army feels that the units' current level of training proficiency for their war-time missions is adequate for the units to support disaster relief support operations.

However, individual training opportunities covering disaster relief operations do exist for certain key staff members at the joint or MACOM level.

Additionally, a significant number of experts interviewed believed the Army would be well served if all Army officers received some form of disaster relief orientation. This training would be conducted as a part of

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*The researcher doesn't believe the regulation should address these topics, but there isn't any other manual that does cover these functions.

the Command and General Staff College (in both the resident and non-r sident courses). The training would cover the role of the Army in disaster relief operations as well as the key agencies involved in disaster relief support.

The current training policy may have to be modified as the Army assumes the mission for Urban Search and Rescue in support of FEMA's emergency support function #9. This mission may involve up to two brigade equivalents of soldiers and may require some specialized training and equipment, if the units are to be able immediately response in support of FEMA's Federal Natural Disaster Response Plan.

Representatives from the Virginia and Alabama National Guard feel the training tney do for civil disturbance operations provides the necessary training to accomplish disaster relief operations. This training philosophy is borne out in national guard unit AARs where four out of five AARs say that civil disturbance training prepared them for disaster relief operations.

Different CINCs have different training philosophies concerning training for disaster relief operations. USCINCSOUTH specifies that the various service components will conduct certain training in order to be prepared for disaster relief operations. USCINCLANT doesn't have a specific training program, though they would like to. USCINCFOR has a specialized training course for selected personnel. The subordinate Continental Army Commands

conduct disaster relief command post exercise drills with assistance from FORSCOM but the exercises aren't under FORSCOM's direct control.

The expert's consensus was the current Army training policy, at the unit level, was appropriate. Several experts did believe the Army should conduct some generalized training for field grade officers concerning disaster relief operations.

Adequacy of Logistics Doctrine.

Based upon interviews with disaster relief experts and review of unit AARs, the researcher concluded the existing logistics doctrine is adequate for supporting disaster relief operations. Not one of the AARs mentioned nor did any expert discuss, a need for some type of specific logistics doctrine for disaster relief operations. Therefore, the researcher concluded that the existing doctrine was adequate. Of the shortcomings noted in the unit AARs, none of the AAR's comments indicated the unit didn't know what to do. Rather, the comments discussed how the unit failed to perform the task properly. This further indicated to the researcher that the logistical shortcomings noted, were caused by a training deficiency, not a doctrinal deficiency.

Other Problems With Disaster Relief Support.

While the analysis determined the logistics doctrine for disaster relief was adequate, the study did discover

several areas where there were problems. These problem areas are discussed next.

Funding reimbursement. The researcher determined, based upon expert information, there was some procedural difficulties for national guard units being reimbursed for all of their expenditures in supporting disaster relief operations (once they have been federalized). Part of this problem stems from the different types of monies the national guard uses (both state and federal monies). The researcher also determined there were deficiencies at the joint level (DoD) covering specific procedures for the joint staffs in processing reimbursable documents.

Disaster relief manuals. There were no other manuals covering logistical support for disaster relief operations except for the information found in FMs 700-80 and 701-58. The researcher did not discover any manual that discussed total Army support for disaster relief operations, even though the Army is responsible for publishing doctrine to support the CINCs' operational mission of disaster relief support.

Doctrinal experts at Combined Arms Support Command (CASCOM) expressed to the researcher a reluctance to work on such doctrine until the joint doctrine writers have produced the joint doctrine for disaster relief operations. The absence of joint doctrine has had an impact on the CINC

staffs, who expressed a need to have some doctrinal material covering disaster relief operations.

The researcher also didn't locate any manual that provided lessons learned (tactics, techniques, and procedures) gathered by Army units as they have supported disaster relief operations. Field manuals under development do not provide any new information concerning disaster relief doctrine.

A draft manual (FM 63-6) under development addressed logistical operations in low intensity conflict. Unfortunately, the manual paid little attention to disaster relief operations and devoted less information to disaster relief than was found in FM 701-58.

The researcher agreed with one expert that there is a need for an all-encompassing manual covering Army operations in support of disaster relief operations. Even though almost all of the units have accomplished their assigned disaster relief support tasks successfully, there have been unit shortcomings. Some of those shortcomings could be minimized in the future with a "how to fight" manual covering disaster relief. This manual would provide a repository of tactics, techniques, and procedures for the units that will conduct disaster relief support operations in the future. A FORSCOM manual prepared for the 1990 Joint Command Readiness Program provided an excellent starting point for this type of a manual. The FORSCOM manual covered

command relationships, missions, and responsibilites in disaster relief operations. The manual also covered many disaster relief situations and has questions and answers concerning these situations.

Conclusions

The researcher reached the following conclusions based upon his research:

1. The existing logistics doctrine for disaster relief operations is adequate.

2. The need exists for an all encompassing doctrinal manual or concepts publication to be made available for units to utilize in conducting disaster relief operations.

3. The Army's field grade officers aren't sufficiently educated concerning disaster relief operations and controlling regulations and organizations. Additionally, the unit leaders that support disaster relief operations have an initial difficulty in understanding the unique role their units are operating within when supporting disaster relief operations.

Observations

The researcher made the following observations based on his research of logistics doctrine for disaster relief operations. These opinions are based upon the data collected. These perceptions came from the various experts he spoke with and the many pieces of literature he reviewed.

1. The role of the military appears to have increased (at least temporarily) in terms of numbers and size of disaster relief and humanitarian assistance following the Desert Storm operations. DoD and the Army could use these missions as justification for increased training dollars for joint training exercises to practice for disaster relief operations and follow-up with humanitarian assistance in third world countries. Unless there is a legal barrier to such an operation, DoD should pursue the opportunity to conduct this training. These mission help to foster the image of the US military as an instrument not only for war, but also for peace. If such training is not legal, then DoD should seek to change the law to allow these types of operations to be conducted.

2. The past deficiencies in logistical support for disaster relief operations can be attributed to faulty command and control procedures, poor mission analysis by unit staffs, individual and unit training deficiencies, and (in some cases) a general lack of urgency to accomplish the mission expeditiously.

3. The researcher sensed a great reluctance by Army logistics doctrine experts to pursue disaster relief doctrine because disaster relief support isn't a combat action. This argument has merit when one looks at the risk to our forces if our combat doctrine isn't properly prepared. However, if one looks at the frequency and

likelihood of disaster relief involvement, then doctrine for disaster relief certainly should get some emphasis. This is especially true when one considers that the services are required to provide the necessary doctrine to support the CINC's missions.

Recommendations From the Study

The researcher has the following recommendations based upon his research effort:

1. That TRADOC prepare a manual or a pamphlet covering the doctrine for disaster relief support. In addition to the doctrine, the publication should cover past lessons learned so that units conducting future disaster relief support operations will have an experience factor to draw upon.

2. That the Command and General Staff College adopt a one-two hour course in both their resident and non-resident courses covering the role of the Army in conducting disaster relief operations. Additionally, the course should address the various organizations the Army will interact with in supporting disaster relief operations.

3. That the CINCs conduct joint disaster relief leader training exercises with their supporting services' leaders and staffs to familiarize those personnel with the disaster relief plans and policies they'll be required to implement. These exercises could also incorporate humanitarian relief efforts if the exercise is into a foreign country.

4. That the DoD and the Army review existing procedures for funding reimbursements and update the appropriate directives and regulations as soon as possible.

Recommendations For Further Study

The researcher recommends the following areas be considered for further study:

1. A study should be conducted to determine the correct doctrine for joint disaster relief support operations. As a part of that study, the researcher should evaluate the existing doctrine for disaster relief and humanitarian assistance as practiced in the relief efforts for the Kurdish people in Iraq and the people of Bangladesh in 1991.

2. A study should be conducted to evaluate whether the military installations are planning to fully utilize the active duty military forces located on that post in the event of a disaster event. Also the study should evaluate the ability of the tenant units to execute the plan.

3. A study should be conducted to review the effect of the proposed down-sizing of the Army and its impact on the Army being able to deploy and support future disaster relief support operations.

APPENDIX A

Existing Plans, Regulations, and Logistics Doctrine

The sources of this data are:

1) Federal Emergency Management Agency (Federal Disaster Response Plan).

2) Department of Defense (DoD) Directives 3025.1 (use of DoD resources for domestic disasters) and 5100.46 (use of DoD resources for foreign disasters).

3) U.S. Army Regulation 500-60 (Disaster Relief Operations).

4) Army field manuals: FM 700-80 (Logistics), FM 100-20 (Low Intensity Conflict), FM 701-58 (Planning Logistics Support For Military Operations), and FM 100-10 (Combat Service Support).

5) Army Focus publication (dated September 1990) which gives the Army policy on various issues within the Army.

6) Disaster relief plans from two Commander in Chiefs (CINCs) (one from from Southern Command [USSOUTHCOM] and the other from Atlantic Command [USLANTCOM]) and plans from the Commonwealth of Virginia National Guard.

7) Training and Doctrine Command (TRADOC) Pamphlet 525-44 (Operational Concept for Low Intensity Conflict).

8) Joint Command Readiness Program Manual, Military Assistance in Civil Emergencies, dated April, 1990.

APPENDIX B

Sample Letter For Interview

Major Gary A. Bracht
1202 Canterbury Lane
Colonial Heights, VA 23834

20 February 1991

USCINCLANT
ATTN: J5(J5/26, LTC Mitchell)
Norfolk, VA 23511-5100

Subject: Disaster relief information

Dear Sir:

Re: Phone conversation on 13 February, 1991

I am pleased that you can be of some help in gathering data on disaster relief operations. As we discussed the purpose of my thesis is to analyze the US Army's logistics doctrine for units that conduct disaster relief operations and then determine if the doctrine is adequate.

I intend to answer that purpose statement by answering these four questions. They are:

Subproblem 1: What is the Army's logistics doctrine for units conducting disaster relief operations?

Subproblem 2: What is the Army's policy concerning units conducting disaster relief training?

Subproblem 3: What influence does logistics doctrine have on the performance of the Army units conducting disaster relief operations?

Subproblem 4: Are Army units satisfactorily supporting disaster relief operations? If not, is logistics one of the reasons why they are not satisfactory.

To answer these four questions I intend to gather data by using unit or activity After Action Reports (AARs). In these AARs I intend to look for references to training and logistics doctrine applicability. Any AARs within the last twenty-five years are acceptable.

I will tentatively arrive around 1000 hours on 1 March and be available to stay until 1400 that day or as long as

required. My schedule is flexible. I would not expect my interview to last longer than 45 minutes.

One final comment about logistics doctrine. I am viewing disaster relief operations as a subset of peacetime contingency operations in Low Intensity Warfare (LIC). Consequently, logistics doctrine as it applies to LIC is especially important from my standpoint. Currently there is little written doctrinally concerning logistics in LIC, especially disaster relief operations.

If there are any problems, please contact me at (804) 520-8418.

Gary A. Bracht
Major, QM
US Army

APPENDIX C

Sample Questionnaire For Interviews

Questionnaire Guidelines

For LTC Mitchell, J5/26 USLANTCOM

INTRODUCTION: READ A BROAD DEFINITION OF LOGISTICS DOCTRINE AND CITE APPROPRIATE SOURCES FOR THE DOCTRINE (i.e. FM 100-10, FM 100-20, FM 700-80, and FM 701-58).

What has been the frequency of disaster relief support that has been provided by USLANTCOM on an annual basis? Has there been any OCONUS deployments?

What is/are the governing manuals that guide USLANTCOM disaster relief operations?

How does USLANTCOM measure success or failure on a disaster relief support mission?

Does USLANTCOM teach any formal instruction on disaster relief operations? If not, do you think they should?

Does USLANTCOM train for disaster relief operations?

If so, briefly, how is that training program set up. Who is it focused towards: units, leaders, or individuals?

What plans guide USLANTCOM in conducting disaster relief operations? CONUS and OCONUS (if applicable). Is a copy available so that I may copy it and return it afterwards?

What role and how are logistics factored into USLANTCOM disaster relief plans and operations?

Are you aware of disaster relief missions where success has been less than desirable due to logistical problems?

If problems existed, were the problems due to a lack of doctrinal knowledge (i.e principles of logistics; fuel, arm, fix, supply; or other specific logistical tactics/techniques) on the part of units or key individuals or were the problems due to failure to coordinate staff actions properly, etc. (non-doctrinal type of causes)?

Do you feel there is sufficient logistics doctrine for USLANTCOM to conduct disaster relief operations?

If not, what more or type of logistical doctrine information do you feel is needed?

Do you feel there is sufficient disaster relief doctrine in general?

Any general comments LTC Mitchell desires to make.

APPENDIX D

SOURCES OF DATA

Primary Data:

Expert sources:

LTC Willhouse, Department of the Army, Engineer manager of disaster relief operations, Directorate of Military Support, Pentagon, Washington D.C.

Mr. Gary Campbell, Chief of Operations, Army Corps of Engineers, Washington D.C.

MAJ Pete Gabriel, Action Officer, Logistic Readiness Center, USCINCLANT, Norfolk, Virginia.

COL Hal James, Plans officer, Virginia National Guard, Richmond, Virginia.

Mr. Walter Keesecker, Logistics officer, Office of Foreign Disaster Assistance, Washington D.C.

LTC Mitchell, J5 (Plans) staff officer, USLANTCOM, Norfolk, VA.

Subject matter expert on logistics in low intensity conflict, CASCOM, Fort Lee, VA.

MAJ Mike Parham, J5 (Plans) staff officer, FORSCOM, Fort McPherson, GA.

MAJ Bo Mayhew, Operations staff officer, 2d CONUSA, Atlanta, GA.

COL Tom Hill, former USSOUTHCOM J4 (Logistics) staff officer, Panama.

MAJ Saylors, Operations staff officer, 167th COSCOM, Birmingham, AL.

Unit After-Action Reports:

193d Infantry Brigade (Panama). "After Action Report, Colombian Disaster Relief Operations, 14 November to 20 December 1985." Fort Clayton, Panama: 12 Feb 1986.

210th Combat Aviation Battalion. "After Action Report, Colombian Disaster Relief Operation, 14 Nov-20 Dec 85." Fort Kobbe, Panama: undated.

South Carolina National Guard. "Operation Hugo: After Action Report." The Military Support Section, Office of the Adjutant General of South Carolina: 3 January 1990.

Virgin Islands National Guard. "After Action Report: Hurricane Hugo, 17 September to 17 November 1989."

United States Army Corps of Engineers Charleston District. "Hurricane Hugo After-Action Report." Charleston, SC: Apr 1990.

United States Army Corps of Engineers South Pacific Division. "After Action Report--Corps of Engineers Response to the Loma Prieta Earthquake." San Francisco: Dec. 1990.

United States Southern Command, USSOUTHCOM J4. "Lessons-Learned, Earthquake in Mexico." Quarry Height, Panama: 23 Sept. 1985.

Headquarters, Virginia National Guard. Staff Journal Log, Hurricane Agnes, 21-27 June, 1972. Richmond, VA: June 21, 1972.

HHC, 116th Seperate Infantry Brigade, Virginia National Guard. "After Action Report for Emergency Operation Western Sub-area Flood Duty 1985." Staunton, VA: 7 December, 1985.

Hqs, 176th Engineer Group (Combat), Virginia National Guard. "After Action Report (RCS ARNGB-98) 'Operation Hurricane Agnes', June 21, 1972 - June 30, 1972." Richmond, VA: 8 August 1972.

Hqs, 3d Battalion 116th Infantry, Virginia National Guard. "After-Action Report (RCS ARNGB-98) Western Sub-area Flood Duty 1985." Winchester, VA: 23 Novemeber, 1985.

Virginia National Guard. "After Action Report (RCS ARNGB-98) Operation Agnes." Richmond, VA: 8 September, 1972.

Company D, 103d Engineer Bn, 28th Infantry Division, Virginia National Guard. "After-Action Report (RCS ARNGB-98)('Operation Hurrican[sic] Agnes')(22-24 June 1972)." Fredericksburg, VA: 30 July 1972.

USCINCLANT. "J4 Lessons Learned During Hurricane Hugo Disaster Relief Operations, Sep 89." Norfolk, VA: 2 October, 1989.

24th Infantry Divsion (Mechanized). "Hurricane Hugo After Action Report (AAR)." Ft. Stewart, GA: 11 December, 1989.

Commander Fleet Air, Caribbean. "Hurricane Hugo After-Action Report." Roosevelt Roads, Puerto Rico: 13 February, 1990.

176th Engineer Group (Combat). "James River Flood 5-9 November 1985 After Action Report." Richmond, VA: 15 November, 1985.

XVIII Airborne Corps. "Executive Summary to HQ, XVIII Airborne Corps (JTF 140) After Action Report (AAR) for OPERATION HAWKEYE." Fort Bragg, NC:undated.

Secondary Data:

Army Logistics Management College Library, Fort Lee, VA.

US Pacific Command, Fort Shafter, HI.

U.S. Army Pacific Command, Fort Shafter, HI.

APPENDIX E

Effects of Natural Disasters

EARTHQUAKES

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
Fissures on surface	Damages buildings, roads, dams and bridges
Landslides	Buries surface structures, temporarily dams rivers causing localized flooding
Liquifaction of soils	Damages buildings
Collapses underground caves, tunnels	May damage structures on surface, may change underground streams
Avalanches	Damages buildings, roads, dams and bridges

CYCLONIC STORMS

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
High winds	Damages buildings, power lines, towers
Flooding (rain and run-off)	Damages buildings, bridges
Flooding (storm surge)	Damages buildings, roads, bridges extensively

DROUGHTS

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
Dry soils	No major damage
Windstorms	Minor damage
Desertification	No major damage

FLOODS

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
Erosion	Undercuts foundation
Mudslides	Buries buildings and damages other manmade structures
Silting	No major effect

TSUNAMIS

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
Flooding	Destroys or damages buildings, bridges, irrigation systems

VOLCANOES

EFFECTS ON LAND SURFACE	EFFECTS ON STRUCTURES
(Blast)	Destroys or damages buildings, other surface structures
Lava flows	Buries buildings, sets fires
Ash deposits	No major effect
Localized fissures	Damages building, dams, bridges

Source: (2:50)

APPENDIX F

Principles of Logistics

1. Logistics Intelligence. Commanders must have accurate and timely logistics information in order to provide effective logistics support.

2. Objective. Logistics endeavors must be directed toward a clear and attainable objective.

3. Generative Logistics. The professional application of initiative, knowledge and ingenuity, and the innovative exploration of technical and scientific advances are fundamental to the generation of logistics systems improvements.

4. Interdependence. Logistics systems efficiency requires effective interrelationships among all functional parts of the systems.

5. Simplicity. To operate effectively at all levels, logistics must be simple in design and application.

6. Timeliness. Logistics support must be provided in the right quantity at the proper time and place for accomplishment of the mission.

7. Impetus. The impetus of logistics support is forward to support the combat mission.

8. Cost-effectiveness. Efficient management of logistics resources is essential to cost effective logistics support.

9. Security. Security of every facet of the logistics system must be maintained to preserve resources and insure sustained combat capability.

Source: (56:8-9)

APPENDIX G

Principles Guiding the Establishment and Operation of Logistical Systems in Low Intensity Conflict:

1. Maximum economy of resources.
2. A flexible task force composition.
3. Ability to implement in any theater or country.
4. Routine use of host nation support to include local services, supplies, facilities, and transportation.
5. Maximum use of existing fixed facilities such as lines of communications, ports, and airfields.
6. Minimum handling of supplies to include the requirement that short duration conflicts (less than 90 days) units will be supported by preplanned resupply packages as much as possible.
7. Provisions for self-protection and passive protection measures for logistics units.
8. Routine use of both strategic and theater airlift until surface transportation can accommodate.
9. Elimination of unnecessary duplication of facilities and overlapping of functions.

Source: (54:3)

APPENDIX H

FM 100-10 Definitions

Combat Service Support Tasks

Manning includes the support provided to the individual soldier as well as the provision of healthy, fit soldiers to units. Manning support includes rations, clothing, and individual equipment.

Arming is the provision of munitions to the weapons systems.

Fueling is the provision of required fuels to weapon systems and other equipment.

Fixing transcends maintenance. Its purpose is to preserve the availability of weapon systems and equipment.

Moving consists not only of the actual transportation of people and material from one place to another but also of the management function which seeks to use resources, including road networks, most efficiently and to the greatest effect.

Protecting includes those actions taken by commanders and staffs to defend their sustainment system.

Sustainment Imperatives

The five imperatives are: anticipation, integration, continuity, responsiveness, and improvisation.

CSS leaders and staffs must *anticipate* future events and requirements by understanding the commander's plan and by foreseeing events as operations develop.

CSS is an integral part of a fighting force at all echelons. *Integration* of sustainment operations with the operations of the maneuver force is crucial. Support forces must be organized to give the commander the greatest possible freedom of action.

Continuity of sustainment is paramount to the continued success of the force. Pauses for rebuilding impede momentum and rob the commander of initiative. Continuity implies the responsibility to ensure that an operation is not affected by a lapse in support or by unforeseen events.

Responsiveness is the ability to meet changing requirements on short notice. AirLand Battle doctrine relies on the ability of the combat force to seize fleeting opportunities. Sustainment elements of the command must be as opportunistic as the maneuver elements.

Improvisation must be a hallmark of CSS. Supporters must seek new, innovative solutions to problems. The routine and the traditional must be discarded if they will not solve a problem. Extraordinary methods may be necessary to get things done.

(Source: 17: 1-9 and 1-10)

APPENDIX I

Listing of AAR Shortcomings by Unit

Virgin Islands National Guard logistical response problems to Hurricane Hugo, 16 Sep 89 to 17 Nov 89.

1. No credible logistical organization for the procurement, issuance and maintenance of supplies, material and equipment.

2. Vehicles were improperly dispatched.

3. Headcounts for mess operations did not function.

4. "A" rations were not available on [the] island.

5. There were insufficient MREs for subsistence beyond on week.

South Carolina National Guard logistical response problems to Hurricane Hugo, 21 Sep 89 to 23 Oct 89.

1. Plans must be in place prior to the operation.

2. Plans must be flexible.

3. Plans must contain guidance regarding the priority for use of equipment in support of civil authorities.

4. Units should maintain current local vendor agreements with local suppliers for raw subsistence, ice and POL (bulk and package).

5. STARC should maintain current vendor agreements with regional suppliers of the same items.

6. All personnel should be required to maintain uniforms, personal clothing and toilet articles at their units in their individual lockers sufficient for the minimum of three days duty.

7. The State Budget and Finance Office of the Adjutant General's Office must become actively involved in planning the supply and service function for disaster operations.

8. Support units should be restricted for use as primary unit support and should not be squandered as substitutes in missions more suitable to Category I designated units.

9. Centralized asset management must be implemented early in the planning or alert phase and controlled during the execution phase by BN or TF size units with aggressive reporting and accountability requirements.

10. Accountability of both expendable and equipment must be maintained during all activated periods.

United States Southern Command logistical response problems to the Mexico City Earthquake, 19 Sep 85.

1. Delayed response time to deliver relief stockpile material to Howard freight terminal.

2. Maintenance of the floodlight set.

3. Inaccurate estimates of the total cube/weight of the stockpile material.

210th Combat Aviation Battalion, Fort Kobbe, Panama logistical response problems to the Ruiz volcano eruption on 13 Nov 85.

1. Equipment requirements were not consolidated during pre-deployment planning.

2. Requests for supplies and equipment from the deployed elements must be consolidated at a central point so that resupply requests and efforts aren't duplicated by the supporting organizations.

193d Separate Infantry Brigade, Panama, logistical response problem to the Ruiz volcano eruption on 13 Nov 85.

1. Disaster relief supplies were palletized under Air Force direction with Army labor and the pallets weren't covered with plastic. Subsequent rains socked the supplies, making them unserviceable. This problem was repeated a second time with additional supplies that were to replace the first pallets of supplies.

US Atlantic Command, logistical response problem to Hurricane Hugo, 17 Sept 85 to 1 Nov 85.

1. FEMA/DOMS/CINCLANT coordination: room for improvement.

Virginia National Guard, logistical response problem to Hurricane Agnes, 22 Jun 72 to 27 Jun 72.

1. Logistical personnel within the commands were not properly trained in the proper handling and accounting for government property utilized during civil emergencies.

3d Bn 116th Inf, Virginia National Guard, logistical response problem to Western Sub-area Flood Duty 1985.

1. Inadequate MREs, cots, and blankets are available at the unit armory for use in emergency situations.

116th Separate Inf Bde, Virginia National Guard, logistical response problem to Western Sub-area Flood Duty 1985.

1. Inadequate MREs, cots, and blankets are available at the unit armory for use in emergency situations.

24th Infantry Division (M) logistical response problems to Hurricane Hugo.

1. Procurement of parts through COPARS was delayed in the initial set-up operations.

2. Laundry procedures for deployed soldiers took over a week to be established.

3. TF deployed to Charleston had a seven day delay before a contracting officer was sent.

4. Installation (Ft. Stewart) support agencies POCs were not available on weekends and holidays.

5. Need for budget officer and FEMA was slow to provide specific guidance on funding.

6. Units failed to provide for necessary organizational maintenance by not bringing PLL, tools, POL products, SSSC products, or necessary forms.

7. The 02 priority system was abused by TF units.

Commander Fleet Air, Caribbean, Roosevelt Roads, PR logistical response problems to Hurricane Hugo.

1. Problems associated with tracking of the flow of relief supplies, equipment and personnel.

2. Use of DoD equipment was being misused for long-term disaster relief operation.

3. A system is needed to identify DoD materials destined to support FEMA relief operations.

4. Logistic support of ships involved in relief operations could be improved.

5. Equipment requested was being delivered by people unfamiliar with the equipment's capabilities.

APPENDIX J

Lessons Learned From Disaster Relief Support

PERSONNEL

1. Expect there will be a lag time following a disaster before personnel will be available for duty, especially if the necessary personnel have suffered damage to personnel property or their families have be directly affected by the disaster.(33)

2. Maintain unit integrity.(32)

3. Standardize unit tours (National Guard specific comment).(32)

4. Establish pass system for personal emergencies and civil obligations.(32)

5. Information and activation packets and briefings would ease the soldier's transition to State Duty under a time of high stress (National Guard specific comment).(32)

6. In operations in foreign countries, linguists are absolutely necessary.(31)

7. Units should activate their family support plan if unit personnel are departing from their installation to support any disaster relief operations.(37)

8. Chain of command must constantly stress safety, as all the good work can go down the drain with one civilian/military serious injury or death.(44)

9. Uniform appearance and uniformity is importance. It helps to identify the various units involved, especially if joint and reserve components are involved.(44)

PUBLIC AFFAIRS

1. PAO must have at least 2 action officers (the Chief plus a deputy). It is not a one many job.(44)

2. If possible, each separate task force should have its own PAO section because the local media will want information from the task force on a continuous basis.(44)

INTELLIGENCE

1. Situation reports must be promptly communicated through the chain-of-command.(32)

2. Area reconnaissance must be continuously performed.(32)

3. Current maps must be obtained and disseminated to the mobilized units.(32)

4. Foreign operations require unit personnel to receive security briefings concerning local threats in the disaster region. The threats from possible terrorist or insurgent groups must be taken into account.(37)

5. If a threat exists, ammunition should be issued prior to deployment.(37)

6. Property security and accountability is paramount for units deploying in support of disaster relief operation.(37)

OPERATIONS

1. Current OPLANs must be reviewed at least annually.(33)

2. Plans must look at the expected damage and estimate the ability of the soldiers/workers to be able to travel from their place of residence to place of duty following the disaster.(33)

3. Appropriate units must be prepared to assume civil disturbance operations as soon as possible following the disaster event.(33)

4. M-day augmentees should be utilized in the EOC (National Guard specific comment).(32)

5. A National Guard liaison officer should be assigned as military contact and coordinator at each county EOC or major urban EOC.(32)

6. All commanders and staff members should be familiar with civil assistance plans prior to activation for disaster assistance.(32)

7. Key personnel and staff members should be activated as soon as possible after the threat is known. Additionally, personnel assigned to replace other staff members on duty should have an overlap period for smooth transition (National Guard specific comment).(32)

8. All sections or sub-units activated should be assigned to an activated unit for command and support.(32)

9. Units should not be involved in the politics of the disaster operation. They should work through their chain of command to the Disaster Control Officer.(44)

10. Often the commander needs a deputy with sufficient authority to represent him to coordinate with the appropriate civilian agencies or officials. The commander will not be able to coordinate and supervise both.(44)

11. Reserve component civil affairs teams may be able to assist a task force in interfacing with the civilian government in the military's completion of assigned tasks by FEMA or OFDA.(47)

DEPLOYMENT ACTIVITIES

1. Determine the mission personnel early on and minimize changes to these personnel.(37)

2. Equipment requirements must be consolidated under controlling headquarters, otherwise excessively duplication will result and draw out the deployment period.(37)

3. Rear detachment organizations should a central collection point to consolidate equipment requests and avoid duplication of equipment sent to the forward units.(37)

TRAINING

1. Emphasize cross-training on operator and maintenance skills for equipment such as generators, vehicles and communications assets.(32)

2. Organizational headquarters and staffs with the potential to be deployed in support of disaster relief operations should have individuals trained with the procedures for disaster relief support and familiar with the appropriate civilian agencies they could be supporting.(47)

LOGISTICS

1. Plans must be in place prior to the operation.(32)

2. Plans must be flexible.(32)

3. Plans must contain guidance regarding the priority for use of equipment in support of civil authorities.(32)

4. Units should maintain current local vendor agreements with local suppliers for raw subsistence, ice and POL (bulk and package).(32)

5. STARC should maintain current vendor agreements with regional suppliers of the same items (National Guard specific comment).(32)

6. All personnel should be required to maintain uniforms, personal clothing and toilet articles at their units in their individual lockers sufficient for a minimum of three days duty (National Guard specific comment).(32)

7. The State Budget and Finance Office of the Adjutant General's Office must become actively involved in planning the supply and service function for disaster operations (National Guard specific comment).(32)

8. Support units should be restricted for use as primary unit support and should not be squandered as substitutes in missions more suitable to Category I designated units (National Guard specific comment).(32)

9. Centralized asset management must be implemented early in the planning or alert phase and controlled during the execution phase by BN or TF size units with aggressive reporting and accountability requirements.(32)

10. Accountability of both expendables and equipment must be maintained during all activated periods.(32)

11. Power generation equipment stored in warehouses must be maintained so that they will work when and if a disaster strikes.(36)

12. Several National Guard armories felt that sufficient MREs, cots and blankets should be kept at the armories for use by guardsmen during disaster relief support operations.(38,40)

13. Search and rescue teams will go through a pair of gloves every three hours. Also personal clothing will be damaged and need to be replaced on a frequent basis.(36)

14. If unit's use COPARS for parts replacement, procedures must be planned for if units depart the installation in support of disaster relief operations.(44)

15. Laundry support for individual clothing needs to be programmed from the start.(44)

16. Units need to planned for a contracting officer to deploy with the unit in support of disaster relief operations. Each task force must have a purchasing officer with a Class A agent.(44)

17. If units are deployed from their installation or if supported by another installation, coordination must be made to ensure 24 hour support is available to the deployed units.(44)

18. Units deployed should have a budget officer available to track reimbursable expenses with the tasking federal agency.(44)

19. Units must ensure they program and project their organizational maintenance requirements if a unit departs in support of a disaster relief operation.(44)

20. Commanders must ensure that high pricrity requisitions system is not abused by units deploying in support of disaster relief operations.(44)

21. Unless there is a centralized control system over inbound relief supplies and equipment, often times the equipment will arrive without enough specific information on the shipping documentation to determine who is the ultimate receiver for the item(s). This is especially compounded when federal, state, and local agencies are all requesting equipment and supplies that is arriving through a central arrival port. The FEMA FCO should be the controlling individual.(45)

22. Units need to ensure their equipment and personnel aren't being utilized to fix long term problems, but are being utilized as an interim measure until the local government is able to resume its responsibilities.(45)

FACILITIES

1. Facilities that are required for use following the disaster must be capable of withstanding the probable disasters. Emergency operations centers must be located in the strongest possible structures.(33)

MEDICAL

1. Medical personnel and equipment must be prepared to handle the expected casualties following the disaster.(33)

COMMUNICATIONS

1. Communications equipment that may be damaged by hurricanes must be positioned in such a manner that they can be secured during the storm and re-installed afterwards to aid in the post recovery effort.(33)

2. Multiple means of communications must be planned for use following the disaster event. Avoid an over reliance on commercial telephone service.(32)(33)

3. Computers must be protected from possible damage so they may be of use following the disaster.(33)

4. State AM-SSB nets work very well. RATT equipment and personnel can be moved from one area to another to expedite command, control, and communication. Armories need to ensure they have back up power generation measures for these communication means in case the primary power source is damaged in the disaster (National Guard specific comment).(32)

5. The need to communicate with local authorities requires coordination and interaction between the National Guard and the civilian authorities.(32)

6. Public radio and TV can be of great assistance in dissemination of information to the public.(32)

7. TACSAT capability is a must when units are deployed into foreign countries.(30,37)

8. Hand held walkie-talkies are excellent means of communications for key personnel while unit is deployed or in the process of supporting disaster relief operations.(37)

COMMAND AND CONTROL

1. There is a need for an immediate and effective chain-of-command. This would create a channel for the flow of information from the highest level to the lowest and back up the chain-of-command. There is also a need for a well defined link between the military and civilian agencies to expedite the assessment of needs and assignment of resources (National Guard specific comment).(32)

2. The MILGROUP (foreign disasters) seems to be the appropriate agency to be a go-between for a deployed US military element and the host country military for problem resolutions concerning. This interface is also needed to cover support requests from the host country.(37)*

3. Active units need to coordinate with National Guard units and combine their efforts and not work around each other.(44)

4. The first question to ask upon receipt of a mission is "who am I working for?" Once ascertained, establish liaison with that agency.(44)

5. A problem for Disaster Control Officers can be DoD Agencies that are operating outside the disaster relief guidelines. The US Army Corps of Engineers and the National Guard Bureau need to advise the DCO when military equipment and personnel are being brought into the disaster area. Often times these organizations will execute various actions without the DCO's knowledge.(45)

6. The DCO must constantly ensure that FEMA is aware of the capabilities of the force that is available to support them. This is especially true with a joint task force with unique capabilities available from the various services.(45)

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*This area command and control has some very complex procedures depending on the nature of the host country's request for US military assistance. Specific guidance must be given to US forces prior to their deployment to avoid any incidents or over-extension of US support to the foreign country.

APPENDIX K

Copies of Interview Notes From Each Interview

NOTE: Interviews are arranged in alphabetical order according to the experts' last name.

Mr. Gary Campbell (USACE) Interview

April 12, 1991

Mr. Campbell provided me with a current updated copy of ER 500.1.1 dated 11 Mar 91 which covers Natural Disaster Procedures.

First he discussed what their definition of success is. He stated that success is not cleanly defined as good/bad/ugly. He stated that the US Army Corps of Engineers (USACE) have a very thorough "lessons learned" process with a formal Corrective Action Process that identifies items to be corrected from the district to the division to the USACE level. All concerned players participate in the Corrective Action Process. **Mr. Campbell stated that public affairs and perceptions are critical and key in measuring success.** Once an issue is raised, it must be solved for the issue to be dropped. Recommending

corrective action is not sufficient for the problem to be deleted.

Mr. Campbell then discussed training. He said that training for the USACE has been a shortfall. He felt that emergency procedures haven't been covered as well as he'd like, but they were getting up to speed at the present time. There are several classes scheduled for the fiscal year. He also stated that he intends to initiate disaster response staff planning visits to the various divisions. The purpose of the visits is for the commanders to formally brief their plans and review their procedures. He stated that a district disaster response cell may only consist of 4-5 people. He said there has been a problem with these cells trying to not only advise the district commander, but also trying to execute the disaster response. He said that is a problem. The cell is to advise and not be an operations cell.

We discussed the frequency of disasters and Mr. Campbell stated that with a 5 year moving average, the cycles of disasters follows a sine wave in frequency. The 1980s were some low years in terms of numbers of disasters. Already the 1990s has shown a significant increase in disaster response missions.

USACE did gain a significant logistics lesson learned from the Loma Prieta earthquake. They learned that the district where the disaster takes place can't deal with the

disaster support and also assist the great influx of personnel descending on that area to assist. Consequently the USACE has initiated the policy that the afflicted district will receive the incoming personnel and let incoming personnel handle the disaster relief support missions. This policy has applicability when you look at the Virgin Islands and the role of the National Guard of trying to assist incoming personnel and also handle the disaster. This area has not been looked at by myself, nor mentioned by any other individual.

Mr. Campbell considered exercises as a part of training.

Within USACE they have a office of history which is the independent evaluator concerning success and failure. This provides another mechanism for identifying problems. Mr. Campbell didn't state whether there had been any failures as identified by the office of history.

We then discussed the role of tactical engineers in supporting USACE operations (either as a part of ESF #3 or ESF #9), or assisting USACE if they are conducting a reimbursable mission for FEMA as a part of a disaster relief operation. This integration of tactical engineers with USACE is a goal of the Chief of Engineers according to Mr. Campbell. As Mr. Campbell envisioned the process, the engineers would be supported logistically by their parent organization (or base support installation) and would

receive any mission support from USACE (i.e. chain saws, contractual support, etc.) This topic brings up several issues: What happens to the engineers base of support if the BSI is damaged by the same disaster? Who trains the tactical engineers in the proper interface with USACE? How will the parent organization tailor their logistical support to the tactical engineer for a mission outside of their chain of command (there are a lot of similarities with joint operations regarding this.)

Mr. Campbell did say there were problems during Hugo concerning tactical engineers who were not knowledgeable concerning the unique command relationships that exists in a disaster relief operation. Campbell felt the tactical engineer officers/commanders should be knowledgeable about the proper interface, but he didn't have a recommendation where the knowledge should come from or who should teach it.

He also said that the DEH on each installation should look at the assigned engineers to that installation as a source of assistance for any disasters on that installation instead of automatically seeking assistance for the district Corps of Engineers office. In Campbell's opinion, there would not be a violation of the Stafford Act if those tactical engineers did assist the DEH.

Campbell stated that FORSCOM is responsible for logistically supporting the USACE elements that will support

the USR mission. He didn't state how that support would be provided.

We discussed the logistics of the distribution sites and assembly areas for all of the national resources responding to a disaster event. This area is a problem for the nation because no one has been given the lead responsibility for providing the logistical support to the various organizations as they get set to assist the afflicted region. He gave an example of Travis AFB where many different agencies were counting on support or real estate from Travis for the Loma Prieta earthquake. Unfortunately, the amount of support desired far exceeded the ability of Travis to provide it.

Campbell felt there is sufficient logistics doctrine for USACE operations. Their logistical operations are supported by contractual agreements, therefore the doctrine needed is mainly administrative guidelines.

Interview Record with MAJ Gabriel

LANTCOM, LRC, 19 Apr 91

MAJ Gabriel stated that the only member trained for the logistics mission on the LANTCOM's DAST team is Commander Young (J43). He has not had any formal training, but has received OJT from his tour as J4 at the former

USFORCCOMCARIB, where he handled disaster relief missions in the Caribbean.

The following topics were discussed. They followed no specific order, but all covered disaster relief operations.

MAJ Gabriel felt that FEMA initially underestimated the impact of Hurricane Hugo and its damage. Consequently, FEMA was slow to specify to LANTCOM the support needed in the relief effort in the Caribbean. FEMA didn't initially provide an LNO to LANTCOM which hindered early coordination (especially considering MAJ Gabriel had one month experience as a member of the Logistics Readiness Center at LANTCOM.) FEMA was slow in designating the priorities of support that was required in the stricken areas. Consequently, LANTCOM wasn't able to focus their efforts as well as they would have wanted to if they had know the priorities of work needed by FEMA.

MAJ Gabriel didn't have access to any cookbook manuals prepared by LANTCOM to ease his transition into operating within the disaster relief arena, consequently, he has initially taken back by the "unknown players" such as DOMS, OFDA, FEMA, etc in the disaster relief arena. Since then he has prepared a basic document covering the pertinent message traffic in disaster relief operations. Also the disaster relief plans are now briefed to each newly arrived person to LANTCOM. Lastly, the LRC has trained three persons to augment the war room logisticians during a disaster event.

He said one problem that LANTCOM had was the volume of citizens calling LANTCOM desiring to donate something or wanting to help. This influx of calls overwhelmed their telephone system because their "war room" had only "x" number of standard telephone lines. He stated that almost 50% of the calls received were from concerned citizens.

We discussed stockpiling of supplies for disaster relief support. MAJ Gabriel was not particularly receptive to that suggestion because he felt you still had a distribution problem with the supplies no matter where they originated from in CONUS. If the supplies were staged in the Caribbean, then you still had to transport the supplies between the islands. With supplies stockpiled at the various depots, a C-130 could still deliver the supplies from the main land within a reasonable time frame, so long as the logisticians at LANTCOM know where to locate the supplies. Experience showed that the transportation system (Military Airlift Command) usually responded to a request within 24-48 hours of notification.

LANTCOM didn't have any problems with supporting military organizations in performing their tasks. All members of the supporting forces were motivated to accomplish the tasks assigned.

MAJ Gabriel did agree with the statement that the leadership within the military isn't always aware that disaster relief is conducted within a different environment

than war time operations. He also stated that the issue becomes more important because disaster relief operations are almost always a joint operation and will involve civilian agencies who the military is in support of.

MAJ Gabriel's opinion was that Hurricane Hugo proved to be a major learning experience for FEMA and for DOMS. He also stated that the joint logistics doctrine (JCS Pub 4.01) doesn't mention disaster relief missions at all. MAJ Gabriel felt that he wasn't in a position to comment on the Army's logistics doctrine from his perspective as a joint planner.

Interview with COL Tom Hill
Director of Combat Developments, QM School
Former J4 member, SOUTHCOM
18 April 1991

COL Hill served in SOUTHCOM from Jul 87 to Dec 89.

SOUTHCOM attempted to measure success by three methods: 1) Did the troops, equipment, material get to where it was supposed to be on time? 2) Did "what was supposed to get there really get there?" (Recounted episode with improper amount of supplies delivered to a country and the incorrect amount was received by high ranking members of that country and the US ambassadorial staff.) 3) Did the coordinations between DoD and DOS actually get met? Basically all of the

success measures have a political basis because the disaster relief mission is a political mission.

SOUTHCOM did attempt to teach some disaster relief topics to the members of USARSO and the Support Group in Panama, but only the G4 staff from USARSO participated. Most of SOUTHCOM's training success was with the various MILGROUPs from each of the countries. SOUTHCOM was able to ensure that the country's disaster relief support plan was viable. SOUTHCOM did conduct some training with the MILGROUPs, but never did with USARSO, even though USARSO was invited.*

COL Hill stated that most of disaster relief operations are logistical operations (transportation, food, shelter, etc.) Mostly, while he was with SOUTHCOM, COL Hill focused on teaching the host nations how to organize and structure there logistical infrastructure to support their forces and their nation. This training would help the country to respond better to a disaster event within their country.

COL Hill felt that those individual logistical tasks and small unit tasks remain the same whether in war or in support of a disaster relief operation. However he felt that the leader tasks do change, especially the "commander's

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*The training wasn't formally termed disaster relief training, but missions and tasks focused on during the training had direct correlation to disaster relief operations.

vision" of the support to be rendered in support of an assigned mission by OFDA.

COL Hill did say there were several instances where poor training and staff procedures caused less than satisfactory performance on disaster relief support missions. One case involved poor accountability of supplies being sent to a disaster area. This resulted in less than the required amount of supplies being delivered. This incident did have international ramifications. A second case occurred in Costa Rica after some floods had hit the country. OFDA requested some aviation support within a certain time frame and had specified the type of aviation support to accomplish the mission. The tasked unit (an aviation unit from USARSO) chose to alter the tasking instructions without authorization and supplied a different combination of aircraft to the area. Additionally, they diverted disaster relief mission aircraft to accomplish maintenance missions for their own aircraft. According to COL Hill, the mission was successful, but OFDA was not pleased with the problems encountered.

COL Hill felt that at the CINC level and within the Joint community, disaster relief was viewed as a very important mission. However, that same feeling was not shared by the Army component in Panama. COL Hill noted cases of poor allocation of MHE for the warehouse mission storing OFDA supplies, and failure of the support group to

validate the required amount of supplies they were to process and transport to Air Force airlift. SOUTHCOM had to resort to placing an O-4 at the airfield to verify the proper amount of supplies were delivered by USARSO for shipment to the disaster site.

COL Hill now feels that the problems he experienced may not have been due to doctrinal issues, but more probably stemmed from command and control problems. He felt that if senior logisticians had applied the logistics principles that existed, a lot of USARSO's problems would have been alleviated. He felt there was probably enough logistics doctrine for disaster relief, but there may not be enough command and control doctrine and LIC doctrine for disaster relief operations.

One area that he felt should be amplified within the disaster relief logistics doctrine is the uniqueness of the disaster relief environment. He gave as an example the approach the infantry has taken to combat in built up areas. While it is but one form of combat, the infantry has devoted an entire field manual to it. He felt the same way about disaster relief, that it is but a subset of logistics doctrine, but disaster relief has peculiar aspects that warrant some form of doctrinal literature to be published.

Interview with COL Hal James, Chief of Plans, Military Affairs, Virginia National Guard (VANG) on February 27, 1991.

COL James stated that Virginia has not had that many natural disasters to deal with. The two most significant were Hurricane Agnes in 1972 and some floods in 1985. Both of these events had after-action reports that were available for review and to make copies of. Few, if any, logistical problems are noted in these AARs. From his view point, most of the planning for logistical operations was very similar to their civil disturbance plans. Virginia's current disaster relief plan is under revision, but COL James said the newly revised civil disturbance logistics annex was almost identical (copy was provided).

COL James went on to say that the VANG falls under the Secretary of Public Safety for state use in disasters not requiring federal intervention. The state is sub-divided into two regions (the eastern sub-area command and the western sub-area command) under the State Area Command.

According to the VANG plans, the logistical procedures for units supporting disaster relief place heavy reliance upon deploying with sufficient supplies from their home station. If local purchase is required, it can be authorized. The state does centrally stockpile backup supplies of critical items and they are pre-palletized for rapid deployment within the state.

The VANG does conduct 16 hours of state sponsored civil disturbance training for its junior leaders. COL James felt this training prepared those leaders to be familiar with the logistical requirements for both civil disturbance and disaster relief operations. The state also has invested heavily in a sophisticated communications network, to include over 100 hand held radios for use by VANG forces in civil disturbance or disaster relief operations.

COL James felt their plans are adequate for disasters even as severe as Hurricane Hugo. He mentioned that South Carolina National Guard spoke at a conference he attended concerning their problems with Hurricane Hugo. After hearing the SCNG comments, COL James didn't feel they would have any logistical problems in supporting disaster relief events. Based on the AARs I've reviewed, their units also showed a lack of logistics problems.

COL Hal James, Commonwealth of Virginia, Department of Military Affairs, 501 E. Franklin Street, Richmond VA 23219-2317. Phone number: (804) 344-4268.

Interview with Mr. Walter L. Keesecker
Logistics Officer, OFDA

Interview took place on 22 Feb, 1991 in Mr. Keesecker's office at OFDA.

Mr. Keesecker recommended that I separate disaster relief operations (from his perspective) from peacetime and military operations. Principally this is done because who is in charge of the operational area whether there is war or peace. If war was in progress, the CINC has the authority and control of the military forces in the region. During peacetime, OFDA decides on the needed response based on request from the afflicted country and then requests support from DoD through the Assistant Secretary of Humanitarian Assistance.

Mainly, OFDA looks to DoD for assistance in transportation and in handling food missions. OFDA receives some medical support from Public Health and USDA (who provide LNOs) while OFDA runs the operation. OFDA does separate medical logistics from other logistical functions.

OFDA does work with the various CINCs concerning training requirements and participates in conferences hosted by the CINCs concerning disaster relief operations.

Mr. Keesecker stated that a problem in the past has been Status of Forces Agreements (SOFA) with the affected country and military assistance in that country. Sometimes the lack of an existing SOFA has delayed the assistance provided by DoD.

Mr. Keesecker did say that from his perspective, the logistical support provided by DoD and the Army within DoD

has been satisfactory and all tasked missions have been accomplished as far as he was aware of.

Mr. Keesecker's biggest concerns about the military was whether prompt transportation support would be available to move his supplies to the disaster site.

Interview Record with Major Bo Mayhew
2d Continental US Army

The interview was conducted on/about 15 March 1991 by telephone. Major Mayhew hadn't been provided a set of questions, but was comfortable discussing the subject with the researcher.*

Major Mayhew's experience with disaster relief operations included serving on 2d CONUSA's staff which oversaw disaster relief operations and also he served as a DoD operations officer in Charleston, SC after Hurricane Hugo.

Major Mayhew's perspective on logistics and disaster relief operations was simple. He said that "the logistics isn't complicated and the support for units conducting disaster relief within CONUS comes from a base support installation (BSI)." Army units conducting disaster relief will draw most of their support from a BSI designated by

*MAJ Mayhew asked the researcher to conduct the interview immediately instead of waiting for the questionnaire to arrive.

FORSCOM. Within the National Guard, they are usually self supporting within their own state. Mayhew said that FORSCOM designated BSIs for units during Hurricane Hugo. (Usually these BSIs were FORSCOM installations.)

Major Mayhew stated that MG Taylor, (now Chief of Staff, FORSCOM) was the CG for the 24th ID (M) during Hurricane Hugo. Also, BG Frank Sefton (a personal friend of Mayhew's) is now the deputy commander for the 167th COSCOM and had some experience with the Virgin Islands support.

Mayhew's approach to designating the units for disaster relief operations was to task organize specific units for the disaster relief mission. He said that DoD Reg 3025.1 prohibited the stockpiling of supplies for disaster relief operations.

Mayhew did comment about two specific logistic dilemmas that he was familiar with concerning disaster relief operations. First, in Mexico City, the search and rescue (SAR) workers used a pair of leather gloves every three hours in searching for victims and casualties. The consumption rate of gloves was extremely high, and people need to take that into account with the SAR (or USR) mission FORSCOM has. A second situation concerned locally purchasing chain saws. Eventually the Army was able to get FEMA's authority to purchase the saws for the disaster relief mission.

Mayhew commented about one situation where DoD was tasked to operate a warehouse facility and handle supply distribution during Hurricane Hugo. He commented that for political reasons, the military was tasked to operate the warehouse and distribution center in Charleston, SC. The mission was given to the 24th ID.

Record of interview with LTC Mitchell, J5/26 LANTCOM plans, on 1 Mar 91.

Interview covered several background issues from LANTCOM's perspective. First we discussed that LANTCOM views disaster relief as a logistics exercise. Within the staff, such as during a hurricane, LANTCOM will establish a disaster watch organization. If the situation grows worse where more staff resources are needed, then the Logistics Readiness Center (LRC) is set up and they will source supplies and arrange lift as needed.

We discussed DAST briefly. LTC Mitchell stated there was no formal training for the DAST commander. The appropriate OPLAN details the responsible organizations for supporting that mission.

We also discussed stockpiling and funding of materials and supplies (i.e. plastic sheeting for shelters, etc.). LTC Mitchell saw a flaw with LANTCOM's inability to stockpile supplies for disaster relief. He said they should stockpile certain items so that military units aren't

stripped of their resources. The example he used was water buffaloes (M149 trailers w/ 400 gallon water capacity) which were used for water holding on St. Croix and Puerto Rico after Hurricane Hugo. LTC Mitchell stated that all available water buffaloes were taken from units at Ft. Hood, the 24th Infantry Div and XVIIIth Airborne Corps plus the Army Depot at Pueblo, CO. He felt that unit readiness was hampered by the removal of these water trailers from units. He felt that the CINCs should be able to hold certain supplies and equipment to better enable them to support their mission. (This feeling is contrary to existing regulations covering disaster relief support.)

LTC Mitchell also felt hampered regarding training for disaster relief support. He felt that it would be in the best interest of the CINC and supporting units if training exercises could be conducted focused on humanitarian aid situations. The units could be deployed along a contingency/disaster scenario and then provide humanitarian assistance at their destination. An example given was Grenada. His feelings were based on desire to exercise and train the entire system (command/control, supply, units, etc.) and not on any failure observations of units in conducting disaster relief operations. Because of high personnel turnover ratios, training exercises would assist in keeping people knowledgeable about the procedures and requirements of disaster relief support.

LANTCOM does host a disaster relief conference each August before the hurricane season. Members attending include FEMA/FORSCOM/XVIIIth Abn Corps.

LANTCOM had just received the mission to execute urban search and rescue, referencing FEMA ESF #9. LTC Mitchell felt that service units trained to MOUT standards (I didn't inquire what those standards were) would be capable of conducting the mission. Mitchell saw special FEMA teams as the people to assess risks on entering into buildings and also to determine the structural integrity of the buildings. He didn't see the search teams having to be trained for that mission.

Significant logistics missions that LANTCOM saw for themselves were: power generation, water distribution and storage, food distribution and storage, storage and distribution supplies for reconstruction (such as plywood and plastic sheeting). The way a mission would happen followed these steps: FEMA would give the mission to provide power to a region, then LANTCOM would locate the necessary equipment and supplies to accomplish the mission. At that time, and prior to any movement of equipment or supplies, FEMA would be contacted and given the price. Once FEMA approved the cost, then the equipment and supplies were moved and the mission was executed.

Funding and control of expenses was a critical area for LANTCOM. Based on past problems with a Bailey Bridge,

LANTCOM had instituted very tight procedures for expenditures and accounting for supplies consumed.

We discussed Virgin Islands (VI) and the disaster relief efforts after Hurricane Hugo. He felt that VI was weak on their disaster preparedness. He also felt that the VI National Guard felt that LANTCOM and others who assisted the disaster relief efforts took over that mission from the National Guard and that VING probably had bad feelings about that.

COMMENTS FROM QUESTIONNAIRE SHEET: LANTCOM had averaged one major disaster a year. In 1988/89 they had Jamaica, Virgin Islands and Puerto Rico all due to Hugo. DoD Dir 3100.46 and 3025.1 guide him. LANTCOM's plans are 2501 and 2500 for search and rescue and disaster relief support. LANTCOM briefs their plans to each newcomer each year, so that does provide some education to their personnel. Also LANTCOM hosts an annual conference on disaster relief support. Logistics are a major factor in disaster relief operations. He was not aware of any failed missions. He did feel there was sufficient logistics doctrine for disaster relief support, but the process for resources and funding process needed to be verified.

ISSUES: 1) Felt that current DoD regulations weren't specific enough regarding funding procedures. 2) Felt that the CINC snould be able to stockpile supplies/equipment for disaster relief efforts. 3) Did feel that Director of

Military Support (DOMS) needed to produce some general written guidance (i.e. SOP) about procedures and methods. Such a document would be very helpful for personnel transitions in LANTCOM.

He gave the researcher a point of contact at FEMA who might be helpful: Curtis Carlson (202) 646-4535. Mr. Carlson had briefed the CINC and LANTCOM about disaster relief.

LTC Mitchell reminded the researcher not to mention any habitual relationships between the CINC and its supporting units in the research paper.

Interview with the LIC logistics SME and her supervisor, CASCOM

22 April, 1991

The interview initially began with the LIC logistics SME as scheduled. During the interview, the LIC logistics SME stated that there were many areas she didn't have enough information about and she asked if I desired to speak with her boss. Her supervisor was the Branch Chief for Echelons above Division within the Logistics Doctrine Division, CASCOM. He oversaw the LIC logistics SME's preparation of FM 63-6, Logistics in LIC which was to be a capstone manual covering logistics in LIC.

FM 700-80 and FM 701-58 were not considered as references for the preparation of FM 63-6 (which is still in

draft format, and may never be published according to the LIC logistics SME.) She commented that those manuals were old and were a product of the Army Logistics Management College (ALMC), not CASCOM. The impression I had from that comment was two fold. The manuals were suspect for not being a CASCOM product, and because they were from ALMC (formerly an AMC school center), their information wasn't oriented to a war time mission. The LIC logistics SME went on to say that her feeling is "CASCOM is focused on war-time logistics. Because disaster relief is a product of peace-time operations, someone else should take the lead on doctrine concerning disaster relief." She didn't elaborate on this even when we discussed that disaster relief is a subset of peacetime contingency operations. A second problem she brought out was the problem she had in waiting for joint literature and doctrine to be developed. This delay forced her to produce the appropriate literature for the areas identified by the joint publications, prior to seeing the joint doctrine.

She had used several joint publications for her draft on FM 63-6. They were mainly JCS Pub 3.07 (Doctrine for Joint Operations in LIC and 3.0 (Doctrine for Unified and Joint Operations). She didn't have a copy of JCS Pub 4.0 (draft) dated Jun 89.

The LIC logistics SME wasn't aware of the Urban Search and Rescue mission that has been tasked to DoD by FEMA. She

stated that she had tried to get after action reports on disaster relief missions, but hadn't been successful.

The LIC logistics SME didn't feel the Army should try to use disaster relief missions as a source for future budget authorizations. Her feeling was, it wasn't our [the Army's] job.

The LIC logistics SME wasn't sure about training requirements because another department within CASCOM handles training. She referred me to Cathy Calhoun, 734-4067 (Ind Training and Evaluation Directorate).*

When I asked if there was sufficient doctrine from CASCOM for supporting the CINCs and the services she said "no, but do we need more doctrine?" She did relay information concerning a seminar where members of each of the branches met and discussed various contingencies to analyze whether there were sufficient forces to handle the missions. One of the contingencies discussed was disaster relief and the consensus at the seminar was there were sufficient forces to handle the mission.

I then discussed several issues with her supervisor. He reiterated the position that CASCOM was focusing on war-time missions and wasn't concerned with peacetime missions.

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*Ms. Calhoun referred me to Chuck Friedrickson who once said he'd get me more information, but he never called back. After May 15, 1991, the researcher had to complete the study without his input.

He did say that he felt CASCOM wasn't far enough down the road to look at other missions besides war-time missions.

He also felt that he wasn't sure if disaster relief was a doctrinal issue, or if it shouldn't be a part of a contingency plan prepared by the CINC. We discussed how disaster relief plans aren't prepared below the CONUSA level or the Army component level in support to the CINC. He did feel there wasn't sufficient doctrine for disaster relief, but then again he didn't see disaster relief as a traditional mission.

He wasn't sure who should write a key manual discussing disaster relief because it involved engineers, medical, logistics, etc. Her supervisor did agree there was probably initial confusion at the unit level on assessing how to support a disaster relief requirement if a unit received the mission. He did say that the individual and crew missions would probably not change from war-time missions, just the environment would change.

He did compare disaster relief with Non-combatant Evacuation Operations (NEO). He referenced it as a valid mission, but with little doctrine written on it. Consequently, he wasn't sure what manual should discuss the operation.

Major Parham (FORSCOM) Interview
April 11, 1991

Major Parham initially discussed the various manuals that guide FORSCOM concerning their disaster relief operations. He discussed their Disaster Emergency Planning System (DEPS) which has several volumes. Volume IV covers disaster relief addressing the catastrophic earthquake plan. He also made reference to the Federal Disaster Response Plan and the three levels of response. He stated that Loma Prieta was a level I response (where the FCO supervises all of the taskings and the responsible agencies for their appropriate ESF missions must work through the FCO). He said that initially it started to be a Level II response (where partial activation of the plan is required), but later it was downgraded to a Level I response. A Level III response is a catastrophic response.

We discussed Urban Search and Rescue (USR) and the logistics for that mission. He stated that FORSCOM had gone to Department of the Army for exception to policy to authorize FORSCOM the authority to stock items for the USR mission. Items to be stockpiled would be gloves, crow bars, etc. Other than those items, Parham didn't believe that the services or the CINCs should stockpile any supplies for disaster relief. The only reason these are needed is due to the short time frame from notification to deployment and

commitment at the disaster site, a unit can't be searching or getting issued supplies from a depot. He didn't get specific concerning whether the unit would rotate and the supplies would be moved or what. Apparently the CONUSA will have the mission and it'll be up to them to monitor and track the equipment and the units.

Next we discussed the disaster relief response for Hurricane Hugo and the distribution center that was run by the 24th ID (M) in Charleston, SC. He stated that the center was effective and accomplished the missions assigned to it. It appeared to him that soldiers were very enthusiastic about their mission, they were proactive, and they knew what was going on.

Then we discussed training for disaster relief operations. MAJ Parham stated that each CONUSA was required appoint and to train a DCO (Disaster Coordinating Officer) for each state. He also stated that each CONUSA does conduct training exercises for disaster events (mainly CPXs or some simulations with scenario discussions and responses being discussed by the appropriate personnel.)

Lastly he mentioned that there is a Emergency Preparedness Liaison Course that is jointly run by FORSCOM and FEMA. It covers not only disaster relief, but also mobilization information. The course is open for high level staff and appropriate personnel from CONUSAs.

Interview with Major Saylors
Plans Officer, 167th COSCOM

The interview with MAJ Saylors took place by telephone on 21 March, 1991. MAJ Saylors had been provided a questionnaire guide and was prepared for the interview.

MAJ Saylors felt the biggest problem with the Army and FEMA was funding. Saylors stated there was no guidance or procedures for the specifics in handling funding issues with FEMA. This was particularly true concerning state monies. He gave an example using state fuel and consumption of that fuel after National Guard units have been activated following a disaster. He commented about the State OMS shops that were closed down when National Guard units were activated because the workers in the OMS were then federalized and couldn't do state missions in the OMS shops.

Saylors also pointed out that FEMA wasn't sufficiently educated concerning the support that was available from DoD and the Army. He discussed one case where FEMA representatives bought trucks instead of tasking DoD for military trucks to accomplish the trucking requirement.

Saylors then explained how the 167th COSCOM supported the Virgin Islands National Guard (VING) after Hurricane Hugo. The 167th was tasked by the NGB to support the VING with the CINC's permission. The 167th was, "given broad plans to assist the VING and to organize their staff and interface with FEMA for the disaster relief efforts." The

167th also deployed a DEPMEDS and a civil affairs team to the VI. Saylors saw a problem with FEMA not being able to integrate or designate those Army assets that were needed in the relief efforts. He used a story of the LSTs from Puerto Rico coming to the VI under their own cost (non-reimbursable) because FEMA chose not to request them, even though the military personnel said they were needed for transportation requirements on the islands. Saylors contended that a FEMA-military team was needed to initially arrive at a disaster site. The FEMA representative would have the ability to assess the situation and have the authority to spend the money to achieve the desired results. The military representative would be there to tell the FEMA representative what military hardware/services was available to accomplish the required missions the FEMA representative desired to accomplish.*

Saylors believed that the same doctrine that tells units how to logistically support themselves and accomplish their mission in war is the same doctrine for disaster relief operations. The only thing that has changed is the circumstances of the military's involvement. Saylors believed that logisticians just need to be flexible in accomplishing their assigned missions.

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*This solution is almost identical to the current DCO/FCO plan. MAJ Saylors didn't say whether the existing plan was faulty or whether it was just poorly executed.

Saylors believed the main problem with FEMA in disaster relief operations concerned FEMA gaining the knowledge to know what to ask for from the military. The second problem he saw was the mechanics for fund transactions needed to be more clearly explained. This was especially true when civilian agencies were being supported from DoD resources. The reimbursement of these transactions needed to be more clearly spelled out for all of the players.

The following comments were answers to specific questions from the questionnaire.

167th COSCOM averaged at least one disaster relief support mission each year, whether state or federally funded.

The guiding manuals for the COSCOM was a state SOP which wasn't specifically designed for disaster relief, but was more oriented towards civil unrest and military involvement in restoring law and order.

In Saylors' opinion, success was measured in how fast the COSCOM could return the responsible civilian players to being in charge of their appropriate areas. He saw the greatest success when the military involvement was short in terms of time. He gave an example of using a Movement Control Cell team to re-establish a distribution system in the Virgin Islands (VI) until the civilian infrastructure was able to take back over the operation.

The 167th COSCOM doesn't have any formal disaster relief training, but a lot of their training in civil-military operations (riot control, etc.) was directly applicable for the key players.

Saylors stated that the 167th COSCOM didn't have any specific plans for conducting disaster relief operations because it wasn't one of their assigned missions.

The COSCOM plans on using their own resources for disaster relief operations within the state. If deployed, such as to VI, then the COSCOM would try to take its own resources as much as possible. Examples given were shower units, laundry, etc. They were also capable of falling in on someone's equipment and assisting the supported unit with personnel and just using the supported unit's equipment.

Interview with LTC Willhouse, Military Engineer Support Officer; Directorate of Operations, Readiness, and Mobilization, DA Staff, Pentagon.

The interview took place from 1430-1545 hours, 1 Feb 91 in LTC Willhouse's office. I was in uniform and had informed LTC Willhouse 1 1/2 to 2 months prior to our interview about my topic. LTC Willhouse has been in his position for over 2 1/2 years and was specifically mentioned by multiple sources as a very knowledgeable individual on domestic disaster relief support. I had originally intended to visit his office on the day of the interview only to look at some after action reports. Once I began talking with

him, I discovered he really didn't have any suitable reports for me, and he was willing to talk about disaster relief, so I did an impromptu interview. I gave him my problem statement and subproblems at the start of the interview.

LTC Willhouse explained how a natural disaster request to DoD originated in FEMA with the Federal Coordination Officer (FCO). The FCO then worked with the Defense Coordination Officer, who coordinated with the Department of the Army (which acts as the DOD Executive Agent for disaster relief operations [IAW DOD Dir 3025.1 and AR 500-60]). He explained that the Stafford Act covered emergency disasters.

We then discussed forest fire support as this was the only disaster relief event that does have a training program associated with it. He explained that forest fire training instructors would link up with a unit at its home station, conduct a day's training there, then deploy with the unit to the fire site. At the field site they would do more training, eventually moving up to a "safe" area on the fire line and then as experience was acquired, move into hotter portions of the fire. LTC Willhouse recounted a quote from former Secretary of the Army Marsh that "fire fighting was as close to combat as you could get without being shot at." He also explained the cost basis of the training and that most of the expenses for support (lodging, showers, hand tools, rations, some transportation, etc) was contracted for the Army because it was cheaper for the Departments of

Agriculture and Interior to provide them than it was to pay the Army for it on a reimbursable basis.

We discussed some future changes to disaster relief responses and the missions that were going to occur and how they will affect the Army and training. A draft version of the Federal Natural Disaster Response Plan was shown (supposedly available through FEMA) to me and it outlined various areas and responsibilities to US government agencies. It lumped each major area as a Emergency Support Function (ESF). The bottom line was, each agency would provide the support to FEMA and if they couldn't support the disaster as fully as needed, then DOD could be tasked to make up the shortfall. An example used was MREs being sent to the Virgin Islands during Hurricane Hugo, even though USDA is responsible for food support during a disaster. USDA was unable to respond as quickly as required to FEMA's request during Hugo, so DOD was contacted.

Future training programs were then discussed. First we talked about the Defense Coordination Officer (DCO, an O-6 appointed for the specific disaster). FORSCOM was putting together a program to train the DCO on his duties so there would be a trained pool of people for the mission. This program is still under development. The FORSCOM POC is Major Parham or Mr. Mike Hammer, (A) 367-7649/7821. The exact status was unknown at the time of the interview with LTC Willhouse.

The second area of future training discussed was the Urban Search and Rescue mission which would be used to go into damaged buildings looking for survivors or casualties. As the mission was currently envisioned, DOD (Army) would be tasked to have two brigade equivalents (one on each coast) trained to conduct the mission. Training would be required, but separate funding would be identified for it. LTC Willhouse estimated it would be 2-3 years before that mission was assumed.

We did discuss National Guard training and response. He clarified that the National Guard remains under state control unless they are federalized. He did say that national guard soldiers can do disaster relief training but not on federal time. They must do the training on state active duty status.

LTC Willhouse was the author of a rewrite of AR 500-60. He said he was writing a DOD Directive that would mirror AR 500-60 except the document would be at the DOD level (he stated the existing DOD Directive wasn't sufficient in coverage for disaster relief events).

LTC Willhouse responded to each of my subproblems with the following comments:

Ref subproblem #1, AR 500-60 covers the required doctrine.

Ref subproblem #2, Units don't do prior training or designate units for disaster relief operations (except for

the fire fighting mission). That would change with the DCO training and the urban search and rescue. He did comment about units not recognizing that the missions they would receive for a disaster relief operation are directly related to their war-time missions. The only difference was no one is shooting at them, and they coordinate and communicate with different organizations that they normally would in combat. But the basic unit mission remained unchanged, therefore the unit shouldn't require training for disaster relief operations.

Ref subproblem #3, he couldn't answer.

Ref subproblem #4, he thinks we're doing a good job. He gave me several POCs at various locations:

6th Army, LTC Pederson (A) 586-5671

LTC Willhouse's replacement after April is LTC McMichael. His phone number was (A) 225-2003 or commercial (703) 695-3848.

FEMA, Mr. Larry Zenzinger or Bruce Baughman (202) 646-3685/3681. They also are POCs for the draft disaster plan.

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